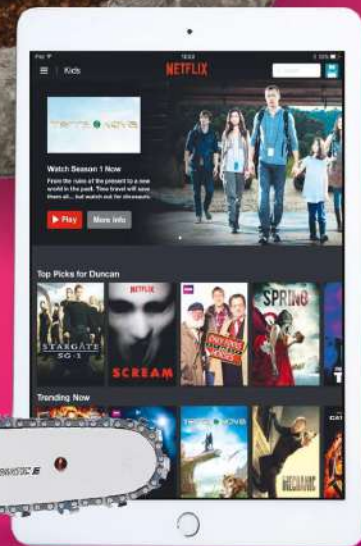
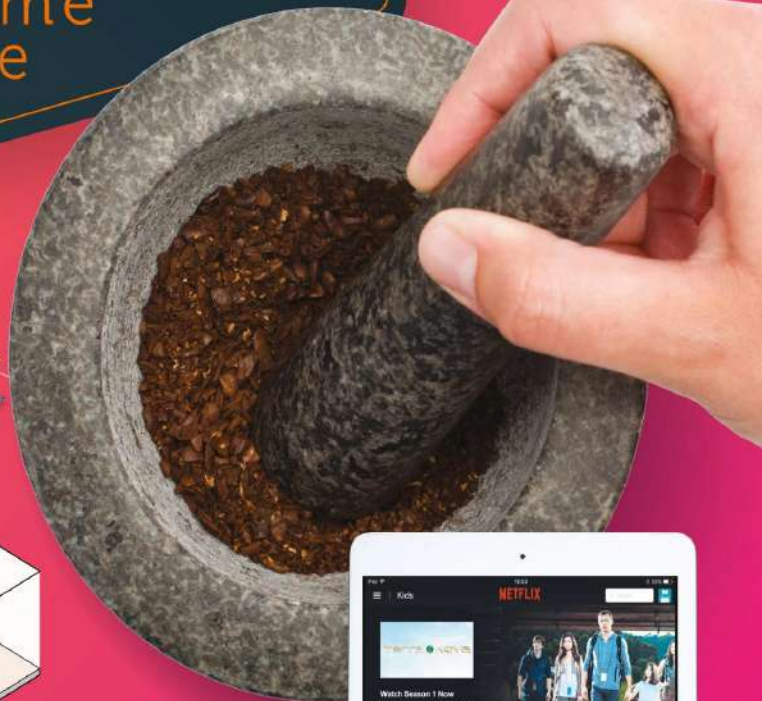


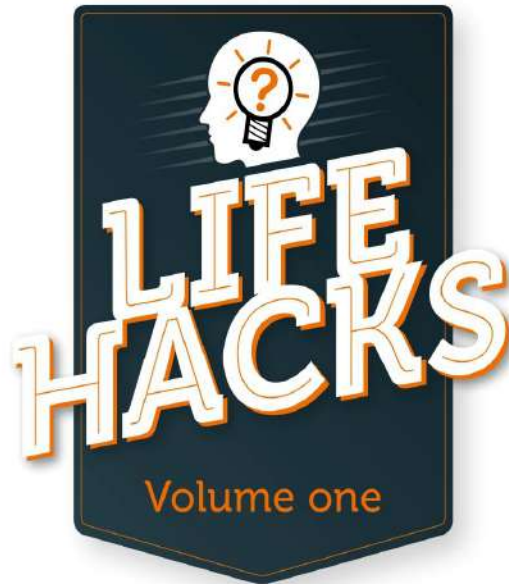


LIFE HACKS

From the makers of
HOW IT WORKS

Volume
one





Welcome

Sometimes you might not even realise there's a much simpler way of doing a difficult job: these are life hacks. In this first volume we'll walk you through tips and tricks on everything from building a garden shed to surviving a marathon.

It's a lifeline for hapless DIYers and a guidebook for technophobes, but even if you think you're a life hack guru, prepare yourself for some truly elegant solutions to problems you've never even thought of.

LIFE HACKS

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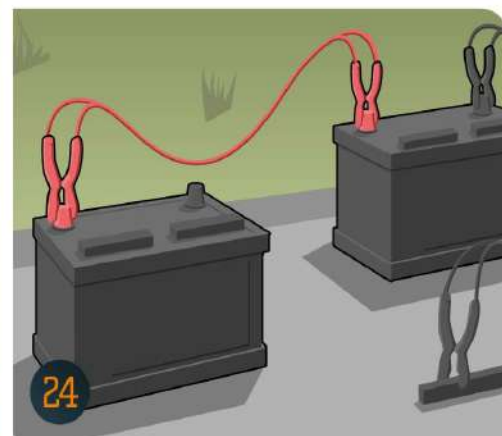
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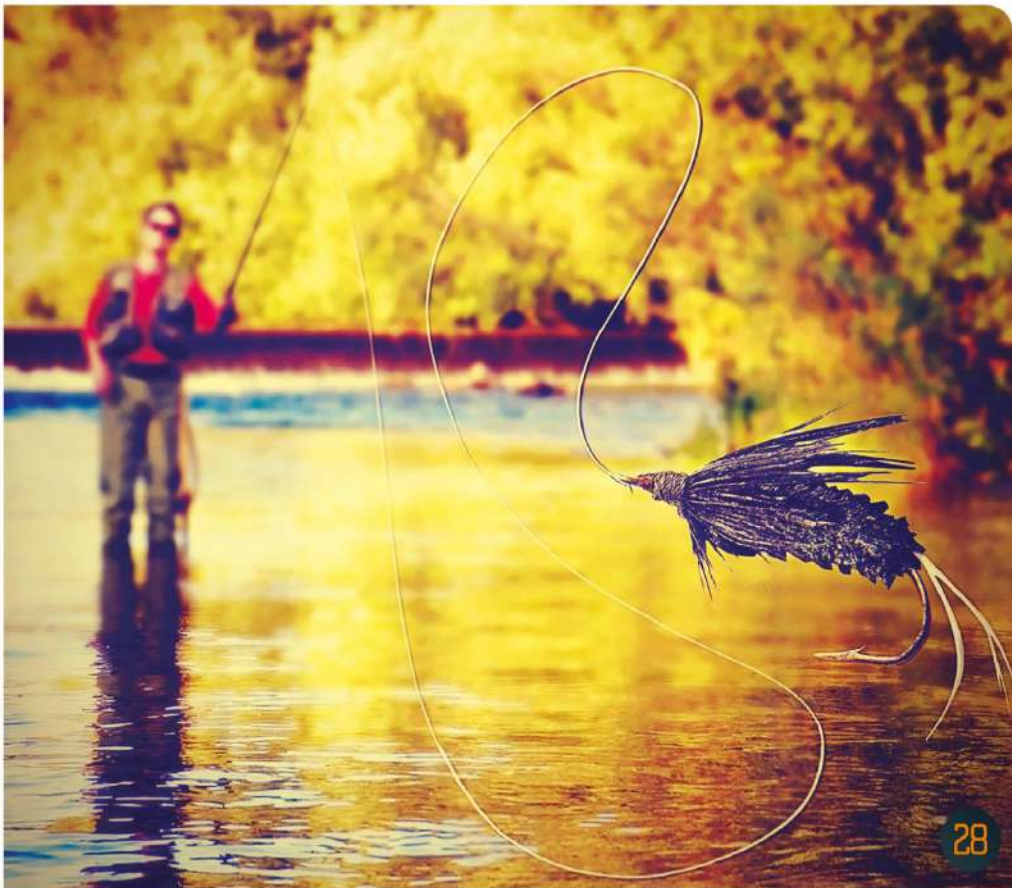
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LIFE HACKS

THE RIGHT WAY TO PUT UP A TENT

Top tips that will make sure you'll always be a happy camper

Camping isn't so bad, right? A few nights away from it all, getting in touch with nature and living the simple life – does that sound nice? Well, yes, in theory it can be a lovely experience, but that small bag containing a baffling collection of fabric, loops, ties and telescopic poles may in fact be a temporary home for a while, but the stress of putting the tent up could make you wish that you had headed to a hotel instead.

Fear not, though, for as long as you've packed this copy of **Gadget** magazine on your camping trip (and why wouldn't

you?), you will have the tent up and the tea brewing in minutes, as we've done all the groundwork for you and added a smattering of patience and know-how to help make this process less like a nightmare.

As with seemingly everything, a little bit of common sense goes a long way. As long as you've remembered all the kit (double-check everything is in your tent bag before you march off into the wilderness), pick the right spot and take your time then you're guaranteed the perfect tenting holiday with no frustration whatsoever.

01 Location, location, location

The first thing to do is pick the perfect spot for your tent. If you've got an allocated plot on a campsite, then it should already be sheltered and flat, but if not, make sure you get a spot that's as level as possible, sheltered from the wind – next to a hedge is always a good idea – and with no trees or power lines overhead. If the spot is exposed, try to make sure you have the wind behind you so that it doesn't blow through the tent, and always pitch it at least ten metres away from any open fires or barbecues to avoid any stray sparks landing on the tent's material.



02 Get yourself organised

So you've picked the perfect spot; now it's time to get the tent up. Unpack everything and ensure everything you need is there before you start. Apart from the tent itself, you should also have a small rubber mallet (you can grab one for around £2 at Halfords) to knock in the tent pegs. Unless you have a particularly fancy or unusual tent, it's safe to assume that you have a number of poles (probably of different sizes), an inner canvas and an outer one (or flysheet) to go over the top of it.

03 Lay out the poles

Now fix together all of the poles and then lay out the inner canvas on the spot you'd like to camp, taking care that the entrance is facing the correct way. Following the instructions that came with the tent (and don't panic if you think you've lost them, as they're often attached to the inside of the tent bag) begin to thread through the first of the poles. They usually go from corner to opposite corner, and there will be several small sleeves along the top of the inner canvas to feed the poles through.



04 Starting to take shape

With a pole already threaded through, connect each end of it to the eyelets in the corners and then you're ready to insert the next one. This will be harder, as the bent shape of the first pole will do its best to get in your way. Take this stage slowly. Carefully thread the pole through the sleeves and try not to pull the pole at any point, or it's likely to come apart under the sleeve – and it's a nightmare to try and then connect it back up. Once through, insert the pole into the other two eyelets, and you should then have a basic tent shape.

£690 | \$670
thenorthface.com

The North Face VE 25

This three-person yurt has reflective guylines and glow-in-the-dark zippers to make it easy to find in the dark. Designed for the adventurous, it can even survive sub-zero Mount Everest conditions.



05 Off the peg

Throw the flysheet over the tent and make sure that the seams of both parts match up. You'll need to attach the flysheet by either ties or clips – either will be attached to the inside of the flysheet, so go around each seam connecting the two parts of the tent. Now peg out the corners of the entire tent, pulling the peg loops tight so that the shape is rigid and the flysheet isn't touching the inner tent – you'll get condensation in the morning if you do. Pegs should be driven in at roughly 45° pointing in towards the tent in order to stop them becoming unhooked if there's a wind.

06 Finishing touches

Now, finish off by going around the tent pegging out any loops along the sides. When it comes to the door of the tent, make sure that the zips are all the way down, otherwise you might find that the fabric is too tight to close them afterwards if you don't. The coloured guy lines are there for extra security in high winds, and you can adjust their length by moving the plastic runner up and down the ropes – if you start with it around one third of the way up from the ground, then that will help to avoid people tripping over them.



CAMPING MUST-HAVES

Cinch Pop-up Tent

Possibly the coolest tent you'd ever own. It pops up in just a few seconds and comes with LED lighting and tent pegs, light-reflective guy ropes and even a solar pack to charge your phone or tablet.

£150 | \$195

cinchpopuptents.co.uk



AirPad 2+

Take (some) of the stress out of camping with this ingenious air mattress. Thanks to a cleverly designed valve system, it's possible to inflate the AirPad with just a few puffs of air. Sounds crazy, but it actually works.

£75 | \$100

windcatchergear.com



Scrubba Portable Washing Machine

Bet you didn't think you'd be able to take a washing machine with you. Drop your clothes, water and detergent in and, using a neat internal washboard, your clothes could be clean in just 30 seconds.

£35 | \$55

thescrubba.com



IceMule Cooler

This ten-litre cooler will keep anything nice and chilled for you for up to 24 hours. Just drop in the ice and you can store anything from food to drinks – it's handy for perishables. It's a backpack, too, so you can easily take it out with you.

£40 | \$50

icemulecooler.com



BioLite PowerLight Bundle

This bundle gives you a standard lantern or torch, but it can also be used to charge up your phone, and comes complete with a pair of daisy-chain lights for overhead lighting.

£85 | \$110

bioliteenergy.com



LIFE HACKS

GRIND COFFEE WITHOUT A GRINDER

Is a hammer up to the job?

So you've finally realised that instant coffee is disgusting and that the 'fresh' stuff you get is far from the brew you get from your local coffee shop. You've decided that it's now time to grind your own coffee beans. But it's not quite as straightforward as you think: high-tech grinders have loads of settings – turning your beans into anything from gravel to powder.

Before you go investing a load of money in a new grinder and start pounding the life out of every coffee bean that's crazy enough to come within a five-mile radius of you, though, it's worth spending some time looking into what you want your grinder to do, and the sort of coffee you like to drink.

If you really fancy the DIY approach, then we've got a range of options for you to grind coffee beans without all the expense and hassle of having to get a grinder. With a bit of practice and a smattering of patience you'll soon be making coffee that tastes infinitely better than anything from one of the chains.



Method 1



GO MEDIEVAL WITH A PESTLE AND MORTAR

There's a possibility that you may have a mortar and pestle lurking in the back of one of your kitchen cupboards, and that would be ideal for the job. Ideal, but tricky, as the round, smooth surface of the bean makes them tricky to crush. The best method is to start with a small amount of beans, crush them and then swap them for a few more. The more you practice your technique, then the easier this method gets.

Did this method work? Yes

Method 2



STICK YOUR BEANS A BLENDER

It seems obvious that a device used for blending things would be perfect for grinding up coffee, but in reality it doesn't actually work that well at all. Firstly, the granules produced from blender-ground coffee beans will end up being different sizes – no matter how long you grind them for. That's important because an inconsistent grind will affect both the flavour and caffeine extraction of the beans. It's on the right track, but not quite the whole ticket.

Did this method work? No

OR IF YOU JUST CAN'T WAIT FOR YOUR COFFEE FIX...



Hario Hand Coffee Grinder

To those of you that are after a traditional look to their coffee grinders, you will no doubt find plenty to love in this modestly-priced bestselling model. **£25 | \$30 | hario.co.uk**



Baratza Encore

At the other end of the pricing spectrum you have the stunning Baratza Encore. Complete with a whopping 40 individual grind settings, it should cater for all of your grinding needs. **£155 | \$130 | baratza.com**



Krups Twin Coffee Mill

You can also get an electric coffee grinder for under £20, too. Don't expect it to have the features of the expensive models, but if you just need a cheap and simple tool for the job then this one's hard to beat. **£20 | \$25 | krups.co.uk**

Method 3



IT'S HAMMER TIME

One of the easiest ways to smash your coffee beans to smithereens is using a nice, weighty object – we recommend a hammer or meat-tenderising mallet. Put the beans into a thick freezer bag (anything too thin will simply rip when you start to hammer it) and hammer them with short, even strokes. While this is an easy method, it's also very hard to get a consistent size of ground beans so your coffee's taste will, unfortunately, suffer as a result of this.

Did this method work? Sort of

Method 4



GENTLY DOES IT WITH A ROLLING PIN

If you're looking for symmetry in the size of your crushed coffee beans, then we recommend putting your hammer away for now in favour of a rolling pin. Put the beans in a tough freezer bag, so that they won't fly all over the place, then roll over the beans with just enough pressure to break them. If you don't have a rolling pin to hand, then you can substitute it with any other cylindrical object that won't break under pressure.

Did this method work? Yes

THE GRIND IS REAL

You might think making coffee is just a case of blitzing some beans and sticking them in hot water, but getting your grind wrong can leave a bitter taste in your mouth – literally. The finer you grind beans, the larger surface area they will have in water, meaning the less time you want to steep them to avoid overloading the flavour. Read on to discover the best type of grind to use in your preferred cup of Joe.

Coarse grind

Your cafetiere (or French press) steeps coffee in water for several minutes before straining out the grounds, so the grind needs to be very coarse or the end result will taste yeh, bitter.

Medium grind

This is the kind of coffee you'll mostly be used to drinking in cafes as it's used in a drip brew. Made in large batches with contact time dictated by a small hole in the bottom of the brewing basket, the grind needs to look like table salt.

Fine grind

Your morning espresso is brewed by using pressure to force water through compacted coffee grounds. The contact time is very short, requiring a fine grind size.

Extra fine grind

Beans ground like flour have a much larger surface area, meaning the taste is much stronger. An essential part of a Turkish coffee.



Bodum Bistro

This cool grinder from Bodum comes in a range of colours and also has a built-in timer for when you want to make sure you grind exactly the right amount of beans. **£110 | \$145 | bodum.com**



Sage Smart Grinder Pro

If you want to take the techno route, then this is the baby for you. It ain't cheap, but it comes with an LED display, 60 settings and high-precision burr calibration. **£200 | \$N/A | sageappliances.co.uk**

LIFE HACKS

WRITE A NOVEL IN A MONTH

A tome wasn't built in a day, but 4 weeks is doable

Throughout November hundreds of thousands of people will be taking part in National Novel Writing Month. Also known as NaNoWriMo, participants in this competition aim to write a 50,000-word novel before the month is over – that's 1,667 words a day. That may sound like a daunting task, but the NaNoWriMo has a passionate community of users, with over 430,000 participating last year, who spur each other on. The NaNoWriMo website (nanowrimo.org) also motivates you by awarding badges for key milestones.

There is no formal prize, most participants do it for the love of writing. But there have been those who have gone on to find fame and fortune: over 250 novels written during the event have been published. Most notably, *Water For Elephants* by Sara Gruen was written for NaNoWriMo in 2006. Not only did this novel go on to be published worldwide, it was also adapted into a movie starring Reese Witherspoon and Robert Pattinson.

If you've ever thought about writing a book, this is the time to try. Read on to find out how to get the most out of NaNoWriMo and discover the best gadgets for writers.



01 Getting started

The event doesn't begin until midnight, 1 November, but you can sign up for it at any time of year. Once you've made your account and selected where you will be writing from you can see the region's Municipal Liaison. These people moderate the forums as well as organise local events that you can attend. Once you're all set up nothing is stopping you from jotting down your ideas.



02 Earning your badges

On the homepage you should see your 'My NaNo' profile, this will have information about yourself and display your badges. There are three types of badges: participation, writing and personal achievements. You award these to yourself by either entering information or by doing fulfilling certain requirements on the website. You don't receive anything for earning them but it's good to show off your milestones.



GADGETS FOR WRITERS



Livescribe 3 Smartpen

This pen uses Bluetooth to send what you're writing to a smartphone or tablet. Its companion app can convert your notes into text and has a search function for your handwritten notes.

£130 | \$150 | livescribe.com



Olympus WS-853

If you're struggling to get your ideas on paper, why not try telling it aloud, recording it and typing it up after? This dictaphone has great quality audio and is easy to use.

£60 | \$65 | olympus.com



Varidesk Pro Plus 36

Avoid any back problems during a long writing session with this adjustable standing desk. It sits easily on existing desks and offers plenty of room.

£335 | \$400 | varidesk.com



Hemingway Editor

Simply copy and paste your work into this web app and it will highlight any unnecessary descriptions, sections of dense text, and tell you how readable your writing is.

Free | hemingwayapp.com



Logitech Create for iPad Pro

A full-size backlit Mac keyboard built into an iPad carry case. It has an auto-wake feature so when you open the case the device turns on.

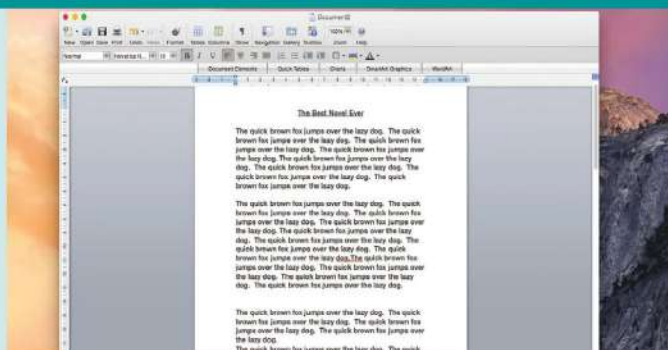
£110 | \$130 | logitech.com



Yoropen Superior Ballpoint Pen

For those who like to write on pen and paper, the Yoropen allows you to see what you're writing more clearly and is designed to reduce hand strain.

£6 | \$8 | yoropen.com



03 Just keep writing

You need to write 50,000 words before the month ends; the value is chosen because, as the organisers say, "it's challenging, yet doable". This equates to 1,667 words a day and writing that amount whilst working or studying among your daily chores may seem like an impossible task, thankfully, NaNoWriMo offers help to those who need it. You're not expected to write the greatest novel of all time, the goal is just to finish it.



04 Get professional help

You don't write your novel on the website, the site is there purely for encouragement and to help you finish. You write your book however you wish, be it by hand or on a keyboard. On the website you can find pep talks from established authors, scoreboards showing which locations are writing the most, livestreams with writers answering questions and more tools available to keep the writer's block at bay.

LIFE HACKS

CHOP WOOD LIKE A CHAMP

Get pro tips from a competitive lumberjack

Maybe we've watched too many horror movies, by the whirring blades of a chainsaw can be pretty intimidating. Looking to chop fire wood for this winter without losing a limb, we spoke with Spike Milton, Britain's most experienced timbersport competitor Milton has been in the forestry industry his whole life and has taken part in several STIHL Timbersports World Championships. This year's competition took place in Stuttgart, Germany, and around 6,000 people attended to see 22 teams from around the world compete. Milton's first rule for any aspiring lumberjack is, "You must get the proper training, even if you're doing it just as a hobby. Each model chainsaw is different, so before you use a new one read the manual. And make sure you have the proper protective equipment, even timbersport competitors wear the gear. Also, if you are buying a chainsaw just for occasional use, don't get a competition-grade model. That would be like jumping into a Ferrari as soon as you pass your driving test." Here's Milton's top tips for chopping wood like a champ.

Economical engine

The MS180 uses 20 percent less fuel than other STIHL models in the same performance class and its emissions have been reduced

£190 | £230
stihl.com

STIHL MS180

Milton's top pick for amateur woodcutters, the MS180 has a single level master control so all the essential functions are easy to access and it's simple to maintain.

Light for its kind

Petrol chainsaws tend to weigh considerably more than the wired models but the MS180 is light, weighing only 4kg

No bad vibrations

The MS180 has an anti-vibration system to reduce oscillations from the engine to the handles, making the job easier on your hands



01 Inspect the workspace

"Have a partner with you before you do any kind of chainsaw work, as you never know what could happen," Milton says. You need to ensure that the workspace you will be cutting in has no obstacles that could get in your way. If you are cutting a piece of timber, place the wood on a secure, flat surface to prevent it from moving. Always start the chainsaw while it is on the floor, the chain itself should not touch the ground as this couldn't cause blunting.



WHAT ARE 'TIMBERSPORTS'?

01 Underhand chop

Competitors stand on top of a trunk and have to cut through it by chopping at both sides with an axe.

Wood chopped: 13-inch thick White Pine

02 Stock saw

All woodcutters use a STIHL MS661. They must cut two disks of wood, one downwards and one upwards, each within a four inch mark.

Wood chopped: 16-inch thick white pine

03 Standing clock chop

Using an axe, contestants must cut through a vertical block of wood by chopping at both sides.

Wood chopped: 12-inch thick white pine

04 Single buck

One person must cut through a piece of wood using a two-person, six-foot long cross-cutting buck saw, all on their own.

Wood chopped: 19-inch thick white pine

05 Springboard chop

Contestants climb a nine-foot high pole by cutting gaps and inserting boards to reach the top and cut down the peak of the pole.

Wood chopped: 11-inch white pine

06 Hot saw

Similar to the stock saw event, except motorbike engines power the chainsaws. Contestants must cut three disks inside a space of six inches.

Wood chopped: 19-inch white pine



02 Starting the engine

Hold onto the top handle with one hand and have one foot through the rear handle to keep it stable. Engage the chain brake and put the master control into the full choke position. Pull the starter rope slowly until you feel resistant and then pull hard upwards. You will have to pull the rope a number of times before it starts. At the end of each pull do not release the rope, guide it back to the chainsaw so it doesn't get damaged.



03 Warming up the saw

After a few pulls you will hear it make a noise like a burp, flip the master switch to warm-up and then pull the rope a couple more times until it starts. Once it has started gently squeeze the throttle. Once it is fired up you can lift it, but never lift a chainsaw above shoulder height. Accelerate the chainsaw a few times to warm it up. "Put one leg forward and plant both feet on the ground, keeping a strong centre of gravity," Milton adds.



04 Cutting wood and stopping

"When you are cutting make sure the chainsaw stays straight and use the bar of chainsaw, not the tip," says Milton. "Be patient, don't try to rush the job by putting pressure on the saw and don't tilt it back and forth, the chainsaw should be doing all the work." To stop the chainsaw first engage the chain brake with your wrist and flip the switch to the off position with your thumb, keeping both hands on the chainsaw at all times.

LIFE HACKS

UNLOCK 1000S OF HIDDEN NETFLIX MOVIES

Don't let pesky restrictions stop you watching Netflix's global library

The next time you're struggling to find something on Netflix, consider this: there are thousands of movies and TV boxsets you can't see because of where you live. With the right app, it's possible to get around these restrictions (if you don't mind breaching the site's terms and conditions). You'll have access to a wealth of new content: *Mad Men* and *Family Guy* in the US, for example, plus all the latest blockbusters that Sky keeps for itself in the UK. Unblock-US is one of the best tools for the job, making your device appear to be located in a country of your choice.



ACCESS UNLIMITED MOVIES ON ANY DEVICE



PC setup

Switching to Unblock-US on Windows involves changing your DNS settings: find these in Windows 10 via Network & Internet from the Settings app, then choosing Change Adapter Options from the Wi-Fi (or Ethernet) page. Right-click the current adapter, choose Properties and set the Internet Protocol Version 4 (TCP/IPv4) DNS settings to those specified on the Unblock-US site – one for primary and one for secondary.



Mac setup

The set-up process for a Mac is very similar to that of a Windows machine. On the latest versions of OS X, go to System Preferences, choose Network and then choose your connection from the left – click the Advanced button, go to the DNS tab and you can enter the Unblock-US values (check the website for the current primary and secondary values). As with Windows, a computer and router restart may be required.



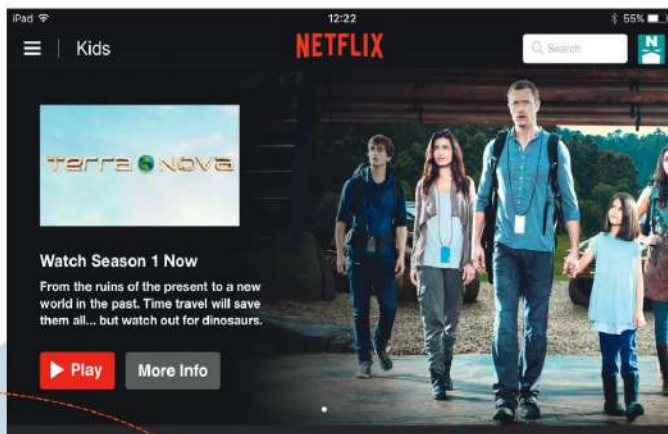
iPad setup

You can use Unblock-US on your iOS device as well. From the Settings app, tap on Wi-Fi, then tap on the network you're currently connected to – tap on the DNS setting and then enter the primary and secondary Unblock-US codes, separated by a comma, as the values when prompted. Restart your iOS device to confirm the changes. If you want to verify that everything is working, visit the Unblock-US website in the device's browser.



Android setup

Android users on the latest editions of the OS (4.0+) need to go to the Settings app, tap on Wi-Fi, and then press and hold on the current network. Choose Modify Network from the pop-up dialog, then tick the Advanced options box – this gives you access to the IP settings, which you should change to Static. Enter the current DNS values (found on the Unblock-US website), then tap on Save and restart your device.



Germany

- Gravity
- Frozen
- The Big Bang Theory
- There Will Be Blood



Belgium

- Captain Philips
- Searching for Sugar Man
- Muppets Most Wanted



Australia

- Guardians of the Galaxy
- The Blind Side
- Big Hero 6
- The Big Bang Theory

"It is possible to get around restrictions... You'll have access to a wealth of new Netflix content"

**Source: MoreFlicks.com, 06-10-2015*



PS4 setup

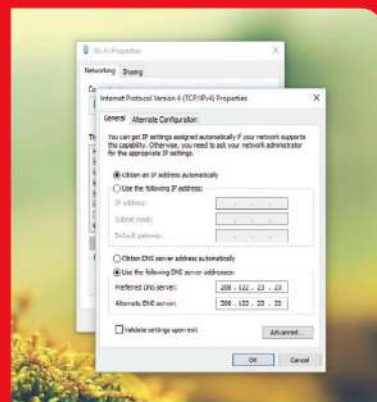
Change the DNS settings on the console by going to the Settings menu and choosing Network from the list of options available. Choose to Set Up Internet Connection, select Custom, then choose the method you use to connect to the internet. Leave the IP address as Automatic, set the DHCP host as Unspecified, pick Manual and enter the Unblock-US DNS codes from the site. Choose Next to test the connection.



Xbox One setup

From the Dashboard of the Xbox One interface, press the Options button on your controller and choose Settings from the menu that pops up. Choose Network>Advanced Settings, then scroll down to DNS Settings – choose Manual and enter the DNS codes you can get from the Unblock-US site. Verify you've entered them correctly and hit B on your controller to save. The Xbox One will check the connection again straight away.

Get started with Unblock-US for free



01 Changing DNS settings

Once you've signed up for a free trial at unblock-us.com, follow the online guide to download the Windows or Mac set-up app, or reconfigure your computer's DNS settings as instructed. You might have to reset both your computer and your router before the new settings take effect.



02 Verify the connection

Everything is handled via the Unblock-US website (which uses your email address for verification) so there are no settings screens to work through or software applications you have to install after the initial setup. On the Unblock-US home page you will see three green bars when you're successfully connected.



03 Choose your country

After that you simply need to pick what part of the world you want to appear to be from: 22 different countries are supported and the check box underneath lets you turn on Netflix captions if you're not confident of being able to understand everything that's being said on the screen.



04 Enjoy the content

The final step: get watching. You should find your Netflix account repopulated with all kinds of good material you haven't come across before, though you can still use the same account and Netflix will keep hold of your viewing history for the shows you've been watching previously.

LIFE HACKS

HOW TO PUT UP A SHELF STRAIGHT

Hanging a shelf is easy, right? Famous last words, but we've got the gadgets to keep you on the level



01 Preparation is the key

Firstly, you'll need to find the right spot for your shelf. Bear in mind that it may appear to be perfectly in the middle of a bare wall, but you need to make sure you're not drilling into pipes or cables. Use a decent cable detector (we recommend the Bosch PDO 6 Digital Detector for this) and avoid any spots where the indicator flashes.

It's said there's no greater test of a man's mettle than putting up a shelf. In theory, it's a simple task, but to attempt it without knowing the basics can lead to a DIY disaster, not to mention potential ridicule. So we have some tips to make it easy and ensure you have the best bragging rights.

As with anything in the DIY world, the trick is patience. Make sure you're fully prepared, have all your tools to hand and if you really want to look like you know what you're doing, then we recommend investing in the gadgets that are designed to make life easier for you. A cable detector could potentially save your life and a laser level not only guarantees you a perfectly straight line, but looks pretty cool too. Here are the steps to follow to get you to DIY Nirvana.

£178 | \$253
makitauk.com

**Makita Autofeed
Screwdriver**

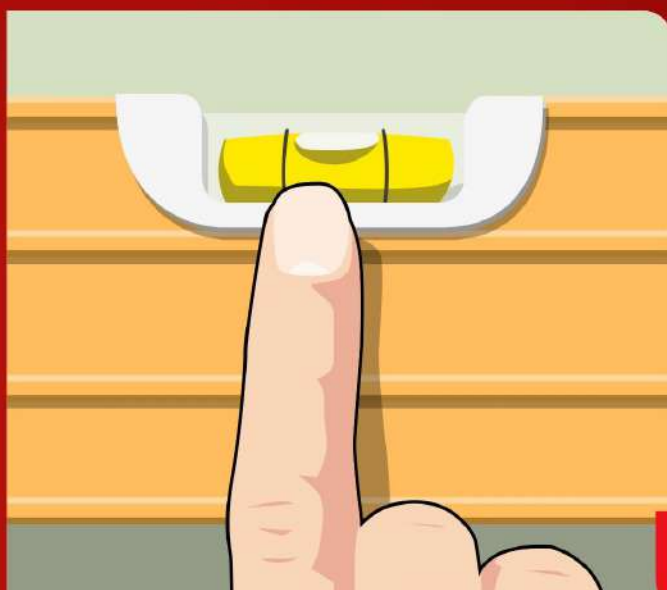
SCREWING AROUND

Rather than have several screws and wall plugs hanging out of your mouth, we suggest you make life a little simpler and get a decent electric screwdriver to take the hassle out of hanging the brackets. Our recommendation? The super-powerful Makita Autofeed is perfect boys' toys for any DIY job. You can attach a screw feed so any job is quick, easy and (hopefully) painless.



03 Hit that sweet spot

Now hold the first bracket up against the line and mark the drill holes with a pencil – if the holes in the bracket are too small then you can use a piece of coat hanger wire or a bradawl tool to make the marks. Remove the bracket and add a nail dent to this exact spot on the wall to make the drilling more accurate.



02 An exact science

If you want to be really smug and use technology to make life much easier for yourself, then get a laser level to mark out the perfect straight line for the shelf. If you feel like doing it old school, place the shelf where you'd like it and use a spirit level to get it completely straight. Now mark a line directly underneath the shelf in pencil.

BISH BASH BOSCH

Messing around with a pencil and a spirit level is so last century, why not use the technology that's out there and do it in sci-fi style? A laser level simply clamps onto a piece of furniture, projects a perfectly straight line onto a wall and is an inexpensive way to guarantee that your shelf is perfectly level. One of the best around is the simple-to-use Bosch Quigo.

£42 | \$66

bosch-quigo.com

Bosch Quigo



04 Where there's a drill there's a way

You can use a standard drill bit for a stud wall, but you'll need a masonry bit if you're drilling into concrete. It will have to be a screw that's at least 30mm in length, so the easiest way to gauge this depth is to measure it on the drill bit and mark it with tape. Drill the holes slowly.



05 Plug the gap

Put in the wall plugs, firstly making sure they're the correct size for the hole. If they don't go in, either use a smaller plug or a slightly larger drill bit (going up 0.5mm should do it). Attach the bracket and then repeat the same process for the other. Simple!

THE BEST OF THE REST: LASER LEVELS

Black & Decker BDL 120

£15 | \$33

blackanddecker.com

Cheap and cheerful, this laser level has to be held up on the wall to project the line, but it does have a spirit level to keep things nice and straight.



DeWalt DW088K Self-Levelling Line Laser

£140 | \$135

dewalt.co.uk

If you're looking for something a bit more professional then the DeWalt Line Laser is pricey yet perfect.



Stanley Cubix Cross Line Laser

£36 | \$70

stanleytools.co.uk

Strong and sturdy, despite the low price, Stanley's laser level comes with its own clamp and has a range of up to ten metres.



Silverline Mini Laser Level (210mm)

£10 | \$20

silverlinetools.com

If you've secretly always desired a laser level, but price is an issue then they don't come cheaper than this one.



LIFE HACKS

MAKE THE PERFECT SMOOTHIE

Looking to make a delicious and healthy breakfast?

Everyone likes to think they are healthy, but the NutriBullet is selling itself as the cheat to maintaining a good diet. So how do you make the perfect smoothie? And what's so different about the NutriBullet anyway?

There's no shortage of blenders, juicers and processors on the market, but the secret to the NutriBullet's success is the powerful motor that's tucked away in its base. With 600 watts of power and a blade that rotates at up to 20,000 RPM,

the NutriBullet is able to break down fruit, vegetables and even nuts in seconds. And you can throw in skins too, as this is often the area of the fruit that holds the most nutrition. So being able to add in absolutely anything healthy to your smoothie plays right into the NutriBullet's hands.

The kit comes with a handy booklet that's full of delicious recipes too, so you really won't have any excuses for not trying to be healthy and get that balanced diet.

"What's so different about the NutriBullet anyway?"

E75 | \$70

buynutribullet.co.uk

NutriBullet

Stylish and powerful, the NutriBullet is the perfect kitchen item for all smoothie lovers out there. It completely breaks down ingredients to make a pulp-free and very healthy drink.

Two types of blades

The NutriBullet pack comes with two varied blade attachments: the Extractor blade and the Milling blade

The cup of life

You fill up this cup with whatever it is you want to blend – this could be fruit, nuts or you can use the NutriBullet to crush ice too

One blender, two cups

You also get two small cups with your pack to empty your smoothie into, both hold up to 380ml of drink

Here's where the magic happens

Inside the base of the juicer, the NutriBullet has a powerful 600-watt motor and a cyclonic action that forces everything through the blades at an incredible 20,000 RPM



How to make the best blend



01 Grab your ingredients

Start by filling up your lid with the ingredients for your smoothie. You can pick one of the many recipes in the book that comes with the NutriBullet or you can do what we do: grab anything and shove it in.



02 Screw on the base

Put in a small amount of water or juice to help the ingredients move when blending and then screw the base onto the top. Obviously make sure it's screwed on tight.



03 Attach it to the NutriBullet

Now turn the cup upside down so that the base of the cup fits onto the body of the NutriBullet. The joy of using the NutriBullet is that everything is so straightforward!



04 Get blending

Push the NutriBullet into place by pressing down and it will start to blend. Regardless of the variety of ingredients you use, this should only take a few seconds. To stop, lift your fruit-filled cup off the base.



05 Wash and go

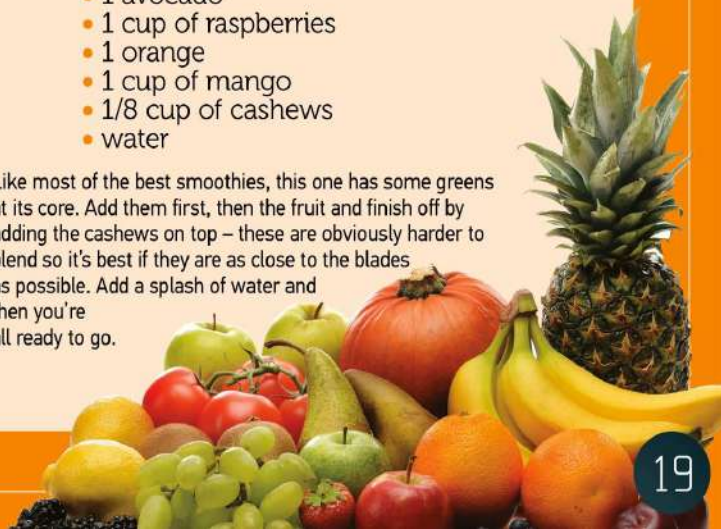
Now your smoothie's ready to drink! Just place a resealable lid on the cup and take it with you on your journey. As there are only a couple of elements to the NutriBullet, washing it out is as simple as every other step, just be careful when handling the sharp blade.

MORNING GLORY

Start your day in style with this delicious smoothie

- 2 handfuls of spring greens
- 1 avocado
- 1 cup of raspberries
- 1 orange
- 1 cup of mango
- 1/8 cup of cashews
- water

Like most of the best smoothies, this one has some greens at its core. Add them first, then the fruit and finish off by adding the cashews on top – these are obviously harder to blend so it's best if they are as close to the blades as possible. Add a splash of water and then you're all ready to go.



LIFE HACKS

HOW TO ESCAPE A BURNING BUILDING

Keep a cool head during a house fire

No one likes to imagine that there will be a potentially fatal fire in their house, but the fact remains that sadly they're an all-too common occurrence and although you may think that your house is safe and secure, accidents do happen.

One thing that could save your life in the event of a house fire is a set of working smoke alarms. Have one in every room of the house and check them regularly to make sure that they really are working.

If there's a fire in the middle of the night then they will almost certainly wake you up before you could possibly know there's a fire in the house.

With the proper kit at your disposal, a decent fire plan in place and a smattering of common sense though, we believe that fire fatalities can be avoided. And although statistics show that house fires and also fatalities are fortunately dropping each year, it pays to be prepared for the worst.

THE KIT THAT COULD SAVE YOUR LIFE



First Alert Fire Blanket

We can't recommend getting one of these fire blankets enough, as it's the perfect thing to have close at hand in an emergency – especially in the kitchen.

£17 | \$25 | firstalert.eu

Nest Protect

From the people who brought you the brilliant Nest Thermostat, the Protect senses when there's a hint of smoke in the house and gives you a spoken warning – it can even send a message to your smartphone to alert you.

£89 | \$100 | nest.com



SentrySafe Fire Chest

If you do have a fire, it's good to know that your most precious documents remain safe. This Fire Chest is the perfect thing for storing any of your valuable documents and jewellery, and it is also guaranteed to have at least 30 minutes of complete fire protection.

£24 | \$27
sentrysafe.co.uk



Firemart 2kg Dry Powder Fire Extinguisher

This small yet perfectly formed fire extinguisher is the ideal size for home use and, as it's dry, it can be used for electrical fires too.

£17 | \$25 | firemart.co.uk



Kidde 3-Storey Escape Ladder

Hopefully this is one thing you'll never have to use, but if the fire spreads upstairs, then this escape ladder could make the difference between life and death. It packs down small so can be stored away, but it's also easy to deploy if you need to make a quick escape.

£65 | \$53 | kiddesafetyeurope.co.uk

HOW COMMON ARE HOUSE FIRES?

28,200

Home fires in England between April 2014 and March 2015

26%

Drop in the number of house fires in the last ten years

215,600

False fire alarms in the UK were attended by the Fire and Rescue Service during 2014 and 2015

44%

Percentage of false alarms attended by local fire services

163

Total fatalities in England in home fires during 2014 and 2015

30%

Drop in the number of fire fatalities in the last ten years

2

Number of home fires started every day by candles

6,000

Number of home fires are caused by faulty electrics in the UK every year

35

Number of people who die in home fires because of a faulty smoke alarm in UK each year

60

Average deaths per year in UK home fires started by a cigarette

Source: UK Department for Communities and Local Government statistics

HOW TO SURVIVE IF THE WORST SHOULD HAPPEN



01 Make a plan

The best way to survive a house fire is to be prepared and have a fire plan. Basically, this means in the event of a fire everyone knows what they should be doing and there's a planned escape. One person in the household needs to be in charge: they need to make sure everyone is out and call the emergency services.



02 Try to close the doors on your way out

If it is possible to safely do so, close the door to the room where the fire originated and then close all the other doors behind you on your way out of the building. This should help to delay not only the spread of the fire, but also the smoke too, which can be just as dangerous.



03 Check for heat before opening the door

Never ever open any doors in the house until you're sure it's safe, as there could be a fire on the other side of it and opening the door could cause it to spread. If you're unsure, touch the door with the back of your hand. If the door feels warm then don't open it.



04 Block all the gaps

If you're blocked in a room by the fire, close all the doors and use towels and sheets (wet if possible) to block any gaps (at the bottom of the door, for example). This will help to stop any smoke spreading into the room. If smoke does get in, keep as low to the floor as possible as smoke rises upwards.



05 Ring for the emergency services as soon as you can

If you're trapped, ring the fire brigade as soon as possible. Also open your windows and shout for help to attract the attention of any passersby or neighbours who may be able to help. This should obviously be the first thing you do if you don't have access to a phone.



06 Get to safety through the nearest windows

If you're trapped and in immediate danger then it's time to get out through the windows. If you don't have an escape ladder then drop as much bedding and cushions out of the window to soften the landing, then climb out and lower yourself down before dropping.

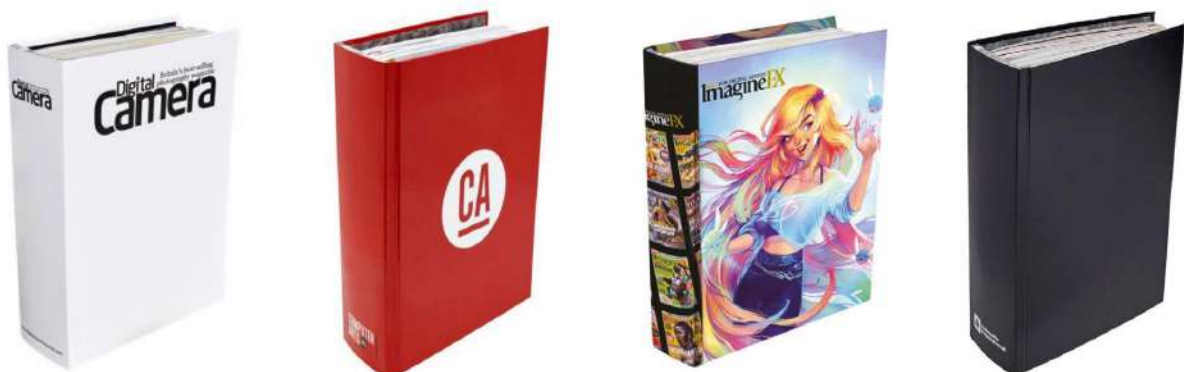
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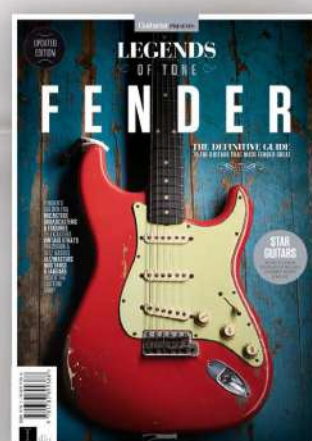
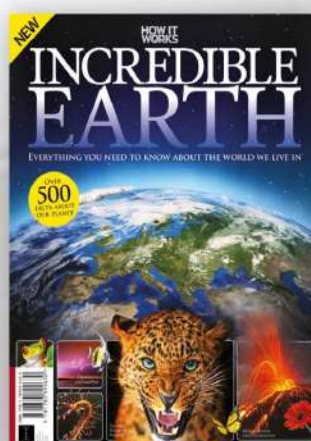
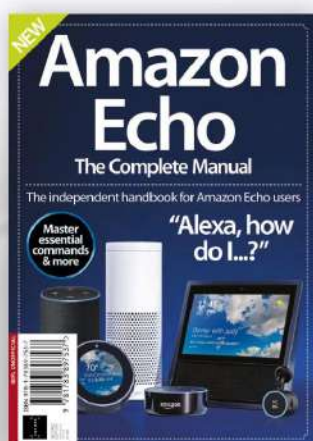
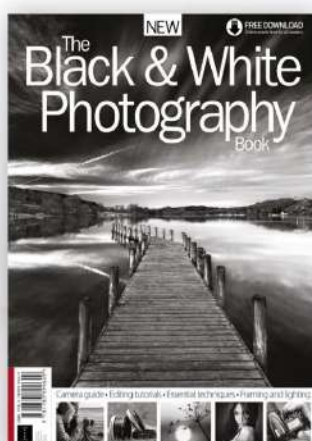


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LIFE HACKS

HOW TO JUMP-START YOUR CAR

Recharging a car with a flat battery is a lot easier than you think

Having a car with a flat battery is something that most of us have experienced at one time or another. Often it's at night, in the middle of nowhere when it's chucking it down with rain – like something out of a horror film. But it's also one of the few things that can go wrong with a car that you can sort out with a minimum amount of fuss and mechanical know-how.

There are several ways to get your car up and running, ranging from the basic jump-start to using modern battery packs like the brilliant Cobra JumpPack – no gadget fan will be out in the cold with a dead battery again if you have one of these in your boot.

Reusable

While the JumpPack is good for multiple uses, it comes with a 12V car charger so you can top it up whilst on the go

Gadget friendly

Using the USB port, you can charge your phone or tablet through the Cobra

Light up

There's a handy light on the front to help you connect the Cobra in the dark or you can use it to flag for help

LED indicator

The LED battery status indicator tells you how much power you have left

Easy connection

These standard jump leads simply connect to the back of the battery pack

£100 | \$130
cobra.com

Cobra JumpPack CPP 7500

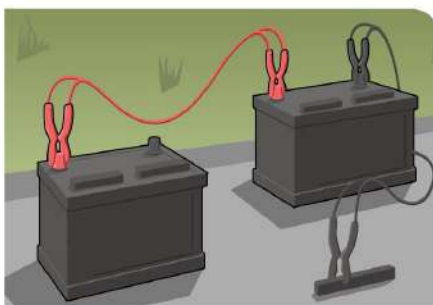
The Cobra JumpPack is the perfect solution to any risky jump-starts. It's small enough to be portable, but is still manages to squeeze in a 7,500 mAh battery.

Recharge car to car



01 Jump to it

All you'll need for this is a willing and kind person with a working car and a set of jump leads. Start by parking the two cars as close together as possible so that the jump leads will reach between the engines, then switch off the ignition in both cars.



02 Think positive

Attach the red lead to the positive terminal on the working battery and then the positive terminal on the flat one. Now connect the black lead to the working battery, but make sure the other end is attached to an earthing point on the other car and not on the battery.



03 The spark of life

Start the engine of the working car, leave it running for a minute and then try the ignition on the other car. If the engine starts, let it run for a couple of minutes before removing the jump leads. When you do remove them, do it in reverse order; so start with the black lead.

JUMP-START WITH A BATTERY



01 Battery power to the people

For peace of mind, there's nothing quite like having a portable battery pack to hand and the Cobra JumPack is easily one of the best. To use it, first make sure that you disconnect all the battery cables from the JumPack.

"The Cobra JumPack is the perfect solution"



02 Get connected

Now connect the red clamp to the positive terminal on the car's battery and the black clamp to the negative terminal. Reconnect the battery cables to the JumPack and make sure they're firmly attached.



03 The key to success

Turn the ignition key for around three seconds and the car's engine should fire into life – if not, wait for around a minute before trying again. If all's good, disconnect the clamps from the battery and then leave the engine ticking over for a few minutes before heading off.

Perfect push start



01 Get into gear

If you don't have a battery pack or jump leads, or can't find anyone with a pair, then you're going to have to resort to the push start. Start by turning on the car's ignition, put the car into second gear and then push the clutch pedal to the floor.



02 Roll on down

If you're lucky enough to be parked on a hill then let the handbrake off and roll down – obviously when it's safe to do so – until the car reaches around ten miles per hour. Then let your foot off the clutch and press the accelerator pedal to make sure you don't stall.



03 Call for backup

If you're parked on the flat then you'll need some help pushing it. Again, wait until the car reaches about ten miles per hour before releasing the clutch and don't forget to let off the handbrake or else you could suffer the anger of those who are trying to push you!

LIFE HACKS

DECORATE LIKE A PRO

The tips you need to avoid a DIY disaster

Decorating a room is easy, right? Well yes, admittedly it's not rocket science, but there's definitely a right way and a wrong way to do it. The last thing you want after spending weeks – or maybe months – pouring over those glossy home-decoration magazines for inspiration, tentatively dabbing tester pots on the wall and arguing over colours until you finally get your own way is to make a silly mistake. For instance, this writer once dripped scarlet red paint on the freshly laid cream carpet they foolishly had installed first.

To help you avoid a similar decorating disaster, here are five simple techniques to get you started, as well as pro tips for choosing the right brush for the job. Sounds too much like hard work? Check out our top five tools to make the whole process quicker and easier.

"Decorating a room is easy, right?"



01 The easy way to strip wallpaper

If the wallpaper has a vinyl coating then it's slightly easier as you can simply scrape off all the vinyl with a wallpaper knife (at least three inches wide). Then soak the backing paper with warm water, leave for around ten minutes and then scrape it off. If your wallpaper has been painted then it's worth scoring it first to let the water soak through. You can use an electric steamer if you wish, which can be rented from any tool hire store.



02 The delicate art of cutting in

Cutting in (the process of painting around the edge of a wall that's bordered with a different colour) is a slow and very laborious task, but it can be made much easier with a paintbrush that has an angled head. You can pick up one of these at any major DIY store or if you have a spare brush around three inches wide, then you can always trim it yourself to save money.

5 TOOLS TO MAKE DECORATING EASIER



Stanley Orbital Wallpaper Scorer

A simple tool to make life easier if you have to remove wallpaper, as the rotary cutting wheels perforate the wallpaper to help with stripping.

£14 | \$30 | stanleytools.co.uk



3M Hand-Masker

For a really professional finish, this masking kit is ideal for masking windows and doors in an instant. It even comes with an instructional DVD too.

£52 | \$36 | 3mdirect.co.uk



JML Point 'n' Paint

The Point 'n' Paint is a simple device with a sponge attachment that makes easy work of applying paint and the pointed end makes cutting-in a doddle too.

£10 | \$15 | jmldirect.com



03 The perfect way to paint windows

Everyone hates painting windows as it takes ages and keeping the paint off the glass is a major hassle. There are several ways that it can be made easier though. Firstly, you can use masking or painter's tape to cover the edge between the glass and the wood, but this can take a while to tape up if the window has a lot of panes. Alternatively, you can just paint over onto the glass and then use a paint scraper to remove it or smear the edge of the glass with Vaseline, which can then be easily wiped off after painting.



04 Lose the drips

It's tempting to overload a brush with paint as you obviously want to do the job as quickly as possible, but a better idea is to dip only the bottom half of the brush into the paint and then tap it firmly on the side of the tin to get rid of excess paint. It'll take a little longer, but the results will be much better.



Purdy Brush Roller Cleaner

A cheap tool that will shave off valuable time when it comes to cleaning out all of your brushes and rollers.

£6 | \$3 | purdy.co.uk



Black & Decker Fine Spray System

If you want to paint quickly, you need a paint sprayer, like this beauty from Black & Decker.

£50 | \$75 | stanleytools.co.uk

HOW TO CHOOSE THE BEST BRUSH

01 Simply the best

Always choose the best brush you can afford. Cheap ones will constantly shed bristles and will hold less paint, so it pays to splash out a bit.

02 Variety is the spice of life

No one brush can do all jobs, therefore get yourself a selection so you have one for every task. A one-inch brush (angled if possible) is ideal for windows and delicate work, a five-inch one is good for large spaces, and finish off with a couple of two or three-inch brushes (one angled) for edges and cutting in.

03 Real or artificial?

You may think that buying a brush with natural bristles is always the best option, but modern synthetic ones are very good too – although natural bristles can give you a better finish for gloss work.

04 Handle with care

If you're going to be using your brushes a lot then it makes sense to get one that feels comfortable in the hand – whether that's wooden or plastic. Hold a few and see which one feels best.

05 Handle with care

Take the time to clean out all the paint from your brushes after you've finished painting to stop them getting hard and unusable. Then, when they're clean, store them upright in a container or jar to stop them warping out of shape when they're dry.



05 The right tools for the job

If you want to be really professional about it, then you could always remove the radiator from the wall to paint behind it, but a much simpler way is to use a dedicated tool for the job. Get yourself a proper radiator brush or roller (neither should cost you more than £5) and you'll be able to quickly paint behind the radiator without getting any paint on the radiator itself.

LIFE HACKS

HOW TO CAST A FLY LINE

Hit the sweet spot every time with our super-fly guide

With spring on the way, thoughts turn to lazy warm days sat by the side of a still lake, enjoying the peace and tranquillity of a day's fishing. Before you get your rod and tackle out of mothballs though, it might be worth spending a bit of time boning up on the essentials.

It might not seem important, but picking the right line for your style of fishing can make a huge difference to the amount of fish you're able to catch. And, let's be honest, we could all do with a bit of help perfecting our swing when it comes to casting.

This workshop will help you to perfect your line-casting skills, so that when you come to casting your line, you hit the sweet spot every time. We also give you a breakdown of the essential knots you'll need, and even an anatomy of the line itself – to ensure that you're packing exactly the right type of line for your style of fishing. Let's go fish!



01 Setting up the perfect load

To begin your perfect casting of a fly line, you need to make sure that it's perfectly set up to get the correct 'load' when you finish the back-cast. The more line you let out of the rod, the more you'll add to the load. The amount of line you should let out varies on the length of your fishing rod and its weight, but a good rule of thumb is that you should let out enough line to equal three lengths of your rod.

02 It's all in the grip

Next, you need to work on your grip. The ideal way to hold your fishing rod is with a grip like you're shaking someone's hand – not too tight, as the casting motion requires a fluid movement, but firm enough to make sure the rod doesn't fly out of your hand!



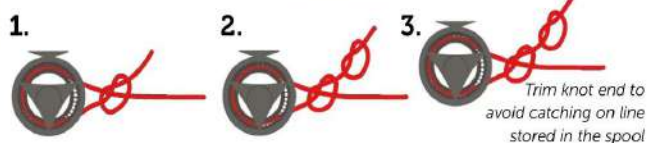
03 Time to cast

Now you're ready to begin your cast, and there are three main ways to do it: sidearm, 45-degree or overhead, so it's best to experiment to find which one feels the most comfortable to you. Keep your wrist stiff, so you get the power from your forearm, and your elbow close to your side. Now pull the rod back to a 10 o'clock position – only bending your elbow.



THE KNOTS YOU NEED TO KNOW

There's a multitude of knots to help you when you're fishing, but here are four of the most essential



Arbor knot

The arbor knot is a simple knot that's perfect for tying your fishing line to the spool of any reel – a fly reel, bait casting reel or a spinning one. Despite its ease to do, the arbor knot is deceptively strong, and could only possibly break if a fish manages to take all your line down to the spool.

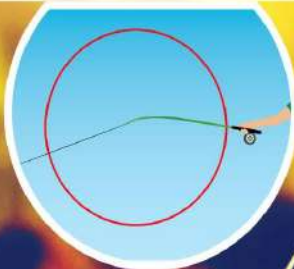


Water knot

This is an extremely strong fishing knot that is designed to join two lines of any size and strength together. The water knot is also very small too, so it's definitely the preferred knot for when you need to thread the bait past the eye of the hook.

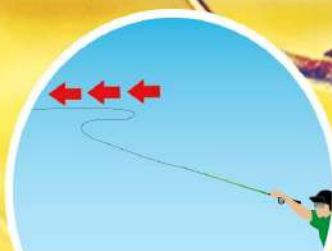
04 Waiting for the fly line

When the fly line fully leaves the surface of the water, pause to allow the momentum of the movement to travel through the line. How long this will take depends on the amount of line you have and the load on your rod. Wait for the fly line to unfurl almost completely so that the leader is nearly fully extended before beginning your forward cast.



05 Moving forward

Now's the time to launch your forward cast. Move your arm forward in a straight line towards where you want your line to land on the water's surface. You should make sure the movement is relaxed, but sharp. As with the back cast, it's important to keep the movement straight for accuracy.

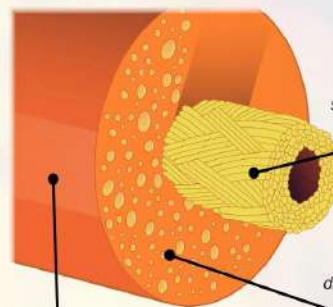


06 Final flourish

To finish your cast, stop while the tip of the rod is still pointing upwards slightly – the momentum will continue with the line and stop it falling short. Ideally, you want to stop your cast at around the 2 o'clock position.

ANATOMY OF A LINE

If you're new to fly fishing, then you might not know the differences between the many varieties of fly lines available. It's important, though, as the line you choose has an impact on the type of fishing you can do – floating fly lines are lighter, while sinking ones have a denser outer coating to allow them to go below the surface of the water. Here's a breakdown of the elements you'll find in a fly line, with a guide to helping you pick the right line for the fishing you'd like to do.



The Core

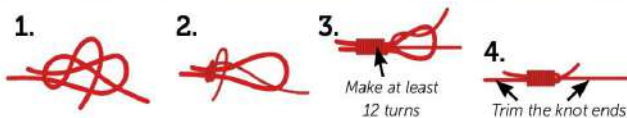
The core varies in size, and it's braided to give the line its strength. Shop around to find a line that's perfect for the fishing you want to do.

Inner layer

The inner layer can vary in diameter depending on the type of line you're using. A double taper line is usually symmetrical, with an even width, while a weight forward line has a thick and thin part and different front and back ends.

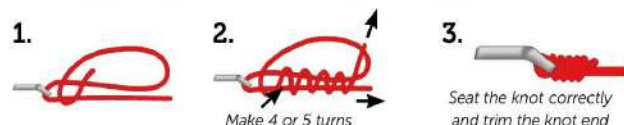
Outer layer

The outer layer is always made from plastic, and it's this that determines whether the line will either float or sink.



Albright knot

The albright knot has a wide range of uses, and although it can be a bit tricky to tie, it's another one that's ideal for joining different types of fishing line – for example, monofilament to braided, or braided to wire. Normally, it's used to join the backing line to the fly line.



Uni-knot

Also known as the grinner knot (or the Duncan loop, after Norman Duncan, the man who created it), the uni-knot is one of the most common used in fishing. Not only can you use it to attach the fishing line to the arbor, you can also use it to join lines or attach lures, snaps or swivels.

LIFE HACKS

COVER UP A CAR PAINT SCRATCH

Buff out the body work and restore your pride and joy

There's nothing more irritating than getting to your car and spotting that it's acquired a scratch or two. Rather than take it to a bodyshop, though, which could end up costing you several hundred pounds, we suggest that you tackle the job yourself.

Like most things regarding DIY, the more effort you put in and the more care you take, the better the end result will look. While you probably can get away with just painting over the scratch line with a pot of matching paint, it could look ugly and rust could be bubbling away beneath the surface.

Although there's a definite right and wrong way to do it, repairing minor scratches and imperfections in your car's paintwork is not as difficult as it sounds. Especially if you follow our fairly easy step-by-step guide...

"The more care you take, the better the end result"



01 Preparation is everything

The first thing you need to do is to make sure that the entire car is properly washed and dried before you start this project. If your car has even the slightest bit of dirt on it then you could end up making more scratches while you're polishing the afflicted area. It's worth paying special attention to the area that you're repairing, and it goes without saying that you should do a final check to ensure that all dirt and debris has been removed from the scratch area before you start.



02 Smoothly does it

Now you want to smooth out the area around the scratch, getting to the bottom of it without causing any additional damage to the paintwork in the surrounding area. Start by using 1,500-grit sandpaper wrapped around a sanding pad and then, when you've reached the bottom of the scratch, switch to 2,000-grit to smooth out the scratches caused by the rougher sandpaper. Rinse the area to remove any further debris or dirt and then wipe it clean using good quality – and clean – cloths, preferably microfibre ones.

THE TOOLS FOR THE JOB



T-Cut Original

T-Cut is the name most people think of when it comes to touching up a car's bodywork, and the formula is still going strong. For small, shallow scratches, this is still probably the best you'll get. £5 | \$7 | t-cut.co.uk



Turtle Wax Premium Scratch Repair Pen

The easiest repair for a small, thin scratch is a repair pen, as all you have to do is guide the it along the scratch and the resin dries in just ten minutes. £10 | \$10 | turtlewax.com



Quixx High Performance Paint Scratch Remover Kit

This kit features all you need for a range of scratches, including tubes of polish and finish, two polishing cloths and strips of fine sandpaper. £10 | \$15 | quixx-usa.com



03 Aye, there's the rub

Next you need to apply rubbing compound to the area, which will take off some of the surface paint, but it also smooths everything out and prepares it for being waxed. You can use a pad here and a bit of elbow grease, but if you can get your hands on an orbital buffer, then that will do the job quicker. With the buffer on its lowest setting, polish the area for around ten seconds. Then increase it to 2,000 RPM for a minute, but make sure that you don't buff in the same area for more than a second or you could go through to the next layer of paint.



04 Wax on, wax off

Once you've finished with the rubbing compound, clean the area immediately before any remaining rubbing compound dries out – it's much harder to get it off the surface of the paint when it's dry. Now, using either a (clean) pad or the buffer again, wax the entire area you've repaired to seal the paint and protect it. All you have to do now is wash the area one final time to make sure that the scratches are completely gone and that the wax has worked and that the area is waterproof.



Chipex Road Rash

The Chipex method works by matching your car's exact paint colour then blending the in new paint to ensure that the finished product looks as good as the day you brought your beloved car.

£35 | \$50 | chipex.co.uk



Ryobi 18V Orbital Buffer

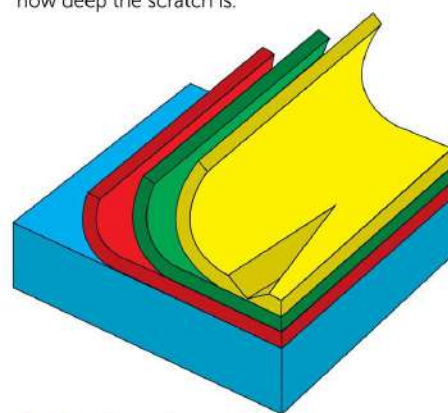
Buffing up your car's paintwork can be a long and boring job – especially if you've got a lot of it to do – so take the strain out of the job with this battery-powered orbital buffer.

£70 | \$50 | uk.ryobitools.eu

PEELING BACK THE LAYERS

No matter what car you drive, the basic make-up of the paint that covers it is fundamentally the same. First, the bare metal is covered with primer (usually just a single coat) and then the paint itself – the quality of the paint will determine how many coats are needed – and then it's just the clear coat on top of that. This is a layer of clear resin that helps to prevent your car's paint from fading in the sun and also improves the colour itself and makes it shine.

To help you when it comes to repairing a scratch on your car's bodywork, it does make sense to understand the various layers, as different techniques are needed, depending on how deep the scratch is.



01 Clear Coat

This is the first layer of paint on the car, and if a scratch has only penetrated this layer then it's moderately easy to repair. It can be just polished out with compound, but make sure to only polish the smallest area possible to avoid any respraying.

02 Base Coat

The Base Coat layer is literally the coloured paint itself, to repair this layer you'll need to either blend in the surrounding paint with a orbital buffer and some rubbing compound or get hold of a pot or can of paint that matches the colour. If you're struggling to find an exact match then check on your car's log book, owner's manual or it might well be on a plate attached to the car's bodywork – which is usually found in the engine compartment.

03 Primer Coat

If the scratch is deeper still and has gone down to the third layer of paint, the Primer Coat, then you will need to get hold of some primer paint to touch up the bottom of the scratch. Using a good brush, paint in the primer to cover the whole of the scratch and then simply sand away any overrun. After that, just follow the same instructions as the Base Coat step in this tutorial scratch to finish the job.

04 Sheet Metal

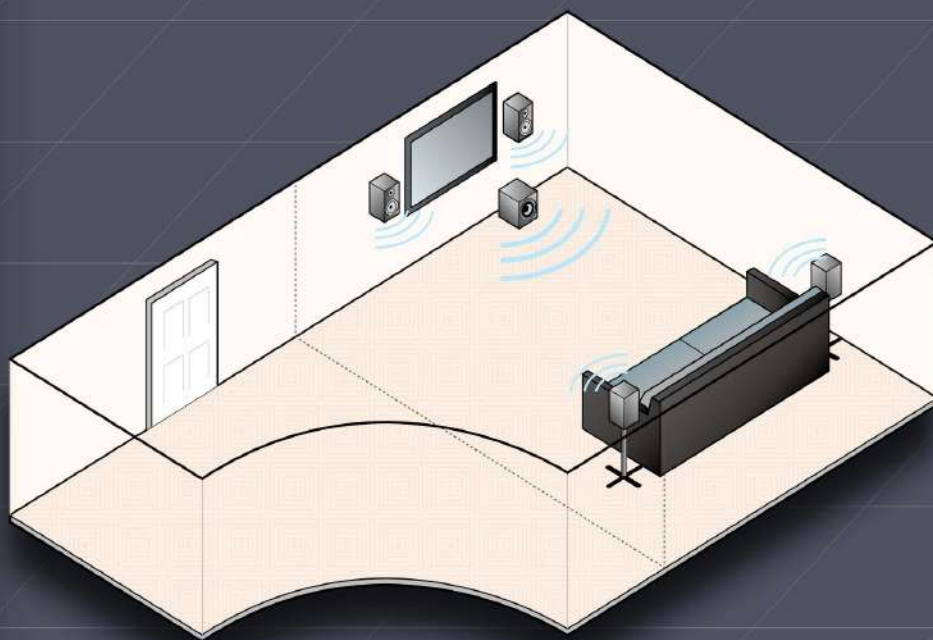
A Sheet Metal scratch is the worst one, as that means that it's deep enough to go right down to the bare metal. You've got to work fast with a scratch like this, as if any moisture gets into the metal and takes hold then you'll have rust before you know it – which is extremely hard to completely eradicate.

LIFE HACKS

GET BETTER ACOUSTICS IN AWKWARDLY SHAPED ROOMS

Get more boom for your buck with these arrangement tips

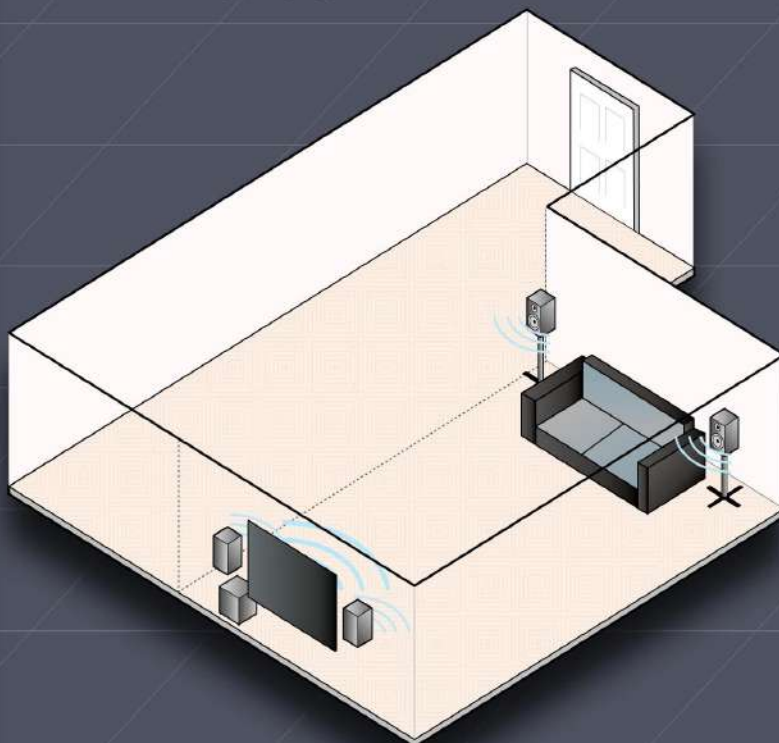
As an audiophile, the quality of your favourite music – be it Led Zeppelin or Mozart – is paramount. With a little care, you can turn the living room in your semidetached house into an acoustical paradise that makes every note and every beat sound as though you were listening live. It all comes down to good speaker placement. Hide expensive speakers behind furniture and they'll sound muffled; put a set of budget speakers in just the right place and they'll sound like they are worth twice the price. The average home though, is not a concert hall, so how do you overcome odd-shaped walls and furniture to guarantee yourself the best sound?



CUTTING CORNERS: MAKING AN ANGLED ROOM SOUND GREAT

So you had to be awkward and choose an abode where the rooms are odd shapes. All those little nooks and crannies suddenly become unappealing when you're after the best sound. Avoid corners by arranging your

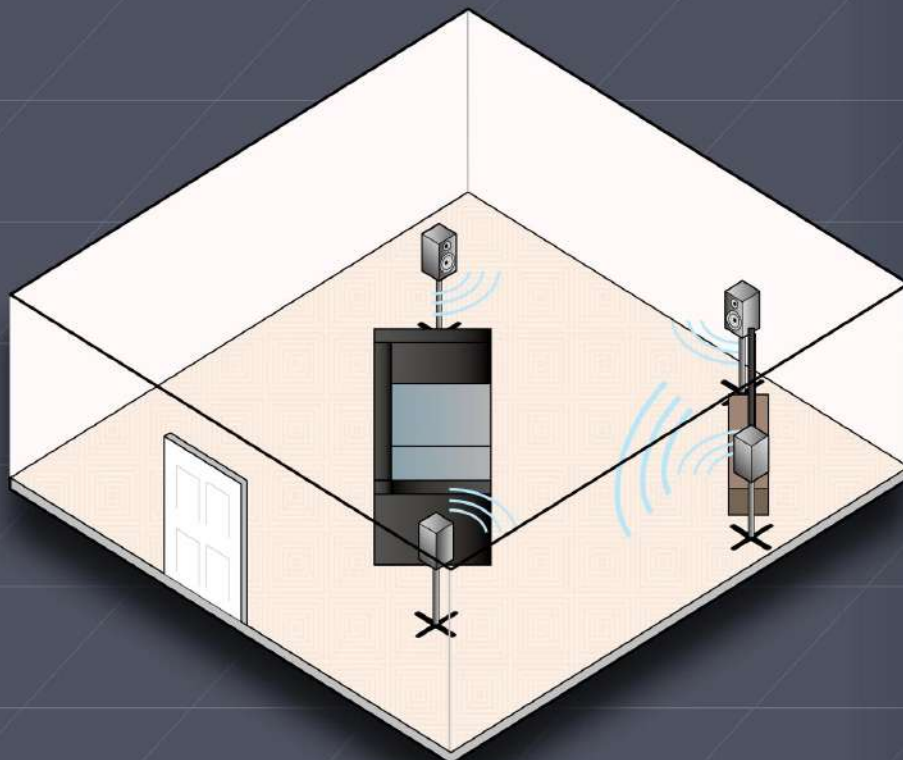
audio/visual equipment and your seating in a rectangle. Although this will obviously mean that you have to arrange the rest of your furniture around them in the space left. But the sound is worth it!



SOUND IN AN L-SHAPED ROOM

The trick here is first to not think about the room as one L-shaped room, but as two rectangular rooms. Ensure your sofa is positioned close to the TV/speakers and not on the other side of the room from them. Inevitably part of the room is going to suffer from poor sound, so make sure it is not the part you predominantly listen to music in.

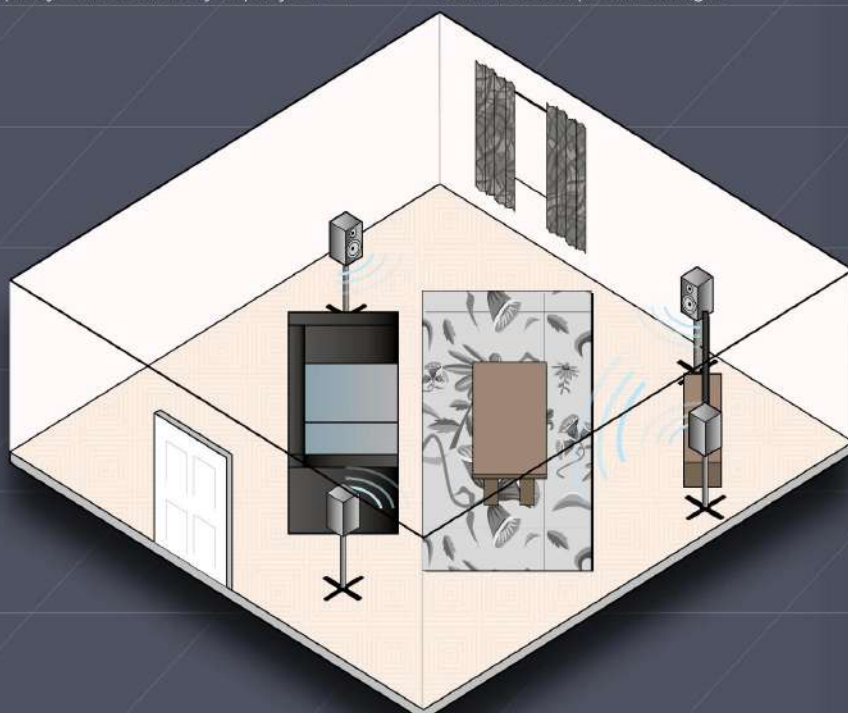
Position your sofa against one long wall and the TV and main speakers opposite it. One surround speaker will be set off from one side wall, but the other will be in the middle of the room. You may have to move it back against the wall to avoid kicking it every time you walk past, although putting it against the wall will minimise its sound quality.



THE AWKWARD SQUARE-SHAPED ROOM

Square rooms are bad for getting great sound from your speakers. The walls are all equidistant, so waves of sound reflect from the walls and end up favouring one frequency over others, affecting the tonal quality of the sound. If you put your TV/

stereo speakers into a corner at a 45-degree angle, away from reflective walls with the speakers at least 30-inches in front of the TV, that can help. Speakers are best placed in an equilateral triangle arrangement with the listener at the tip of the triangle.



WHY REFLECTIVE SURFACES ARE BAD

All rooms are reflective, with sound waves reverberating from flat surfaces such as walls, tables and counters. These reflections work against the sound quality of your music or the television to varying degrees, depending upon the shape of the room and the presence of other factors, such as furniture and carpets, which can absorb

sound (known as damping). While damping can nullify standing waves, which cancel certain frequencies when they reflect off a wall, damping can also significantly lower the volume of your music. Although this may be to the delight of your neighbours, it isn't ideal for music lovers who enjoy listening to their tracks with audio clarity.

YOU AND YOUR SPEAKERS

Get the speakers positioned right and you're halfway there

The triangular T-shaped arrangement of speakers enables sound to be projected equally around the listener. The idea is to have the left and right loudspeakers placed at equal distances from your position at the tip of the equilateral triangle, so that sound arrives in phase from both sides. Sound is not distributed evenly between the two speakers – if they are placed so they are out of phase, the result can be that the sound from one speaker cancels the sound from the other. They are angled by about 30 degrees to the listener, and 60 degrees from one another (remember, the angles of the three corners of an equilateral triangle are all 60 degrees, adding up to 180 degrees).

Speakers

Stereo speakers provide two audio channels. The two stereo speakers should go either side of the TV in a T-shape arrangement. This setup is known as a 2.0 audio system.

Subwoofers

These bass-inducing devices can be placed anywhere in a room. Adding a subwoofer to a two-channel setup is referred to as a 2.1 system.



Surround sound

Surround speakers create an immersive sense of sound. They should be at an angle of 110 degrees to either side of your listening chair, equidistant from you and not up against a wall. The common 5.1 surround sound system includes five speakers for five channels of audio, plus one subwoofer.

Rear speaker

A 7:1 system with seven speakers is the best that most home audio receivers can handle. The extra speakers go at the rear of the room, left and right, 135 to 150 degrees behind your listening chair. However, fewer Blu-ray movies currently cater for 7.1 audio systems better than they do for 5.1.

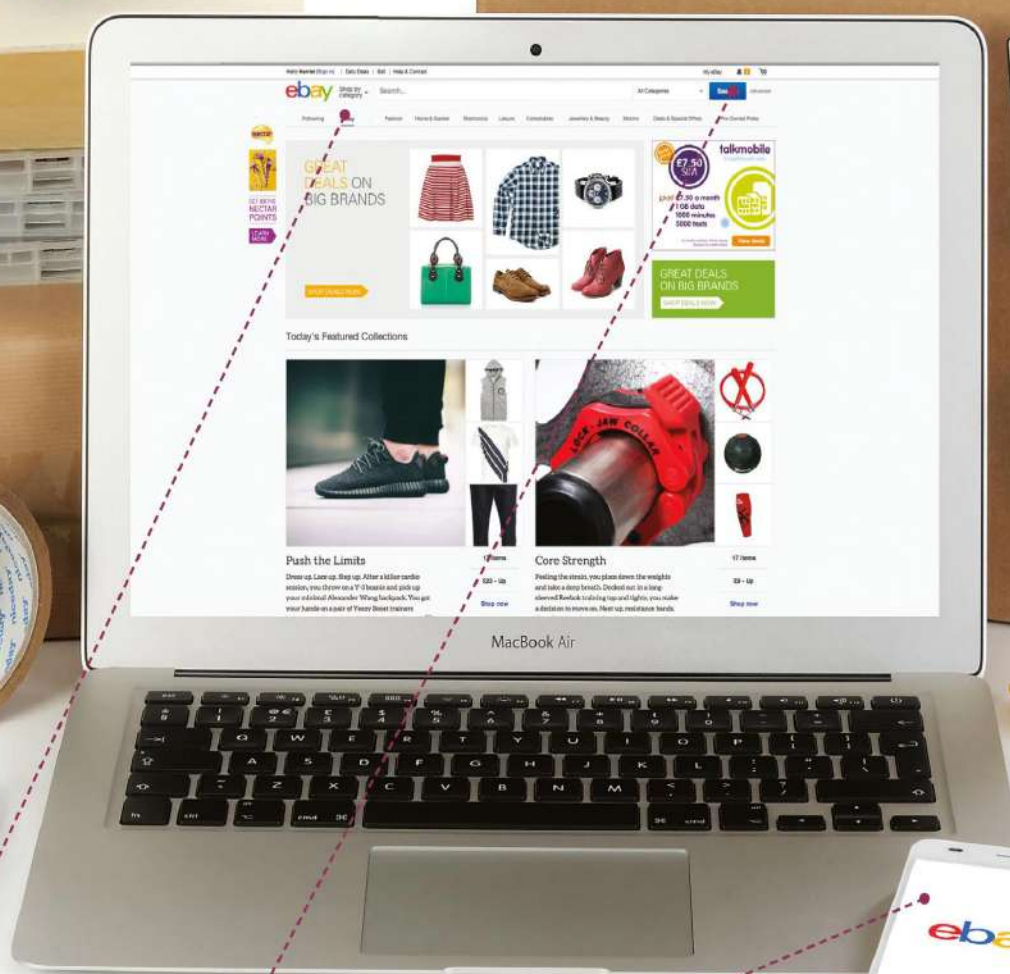
LIFE HACKS

4 STEPS TO AVOID TERRIBLE EBAY CUSTOMER SERVICE

Or where to really go when you need help on eBay

eBay is brilliant when you have a load of stuff that you're desperate to get rid of, but the flip side is that it can also be a nightmare when things go wrong. The first response is usually to grab the phone and try to speak to their customer services department, but the service they offer is notoriously dreadful and most

people we know are not big fans of being put on hold for a long time listening to Eighties music. All is not lost though as there are a multitude of ways to resolve any issues you might have whilst avoiding this bad service, as there are plenty of eBay users out there that probably know more than the people who run eBay.



Sign in

For solutions to common problems, go to the Help & Contact page (found at the top of the homepage), but you must sign in for it to work

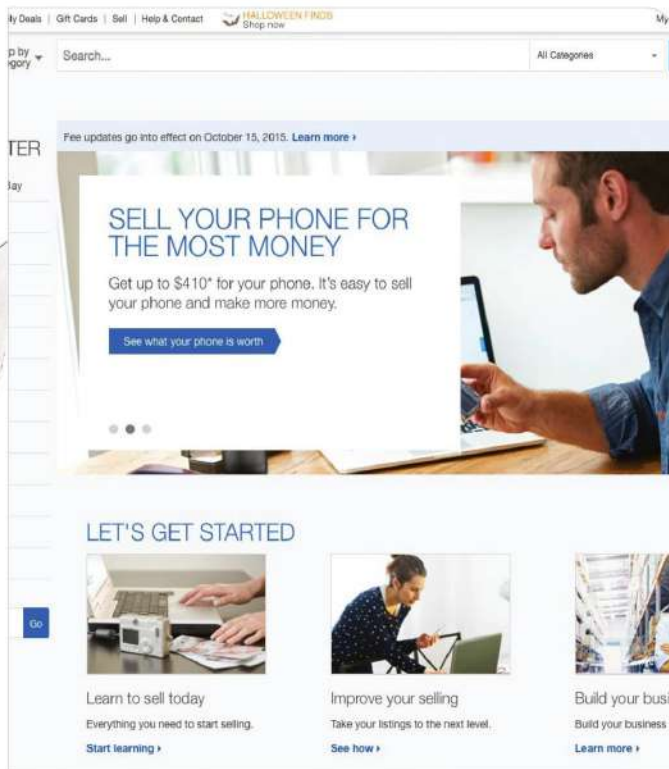
Slow emails

There is always the option to email the customer services team, but the replies can take a while and it still may be an automated response

Phone hurdles

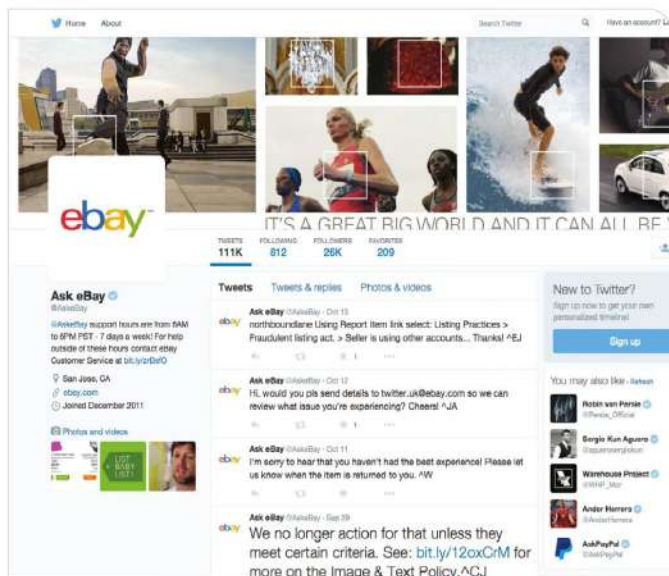
There have been many complaints about being put on hold for a long time. There's also the various automated stages to get through even before the phone rings

Most eBay problems can be solved without a phone call



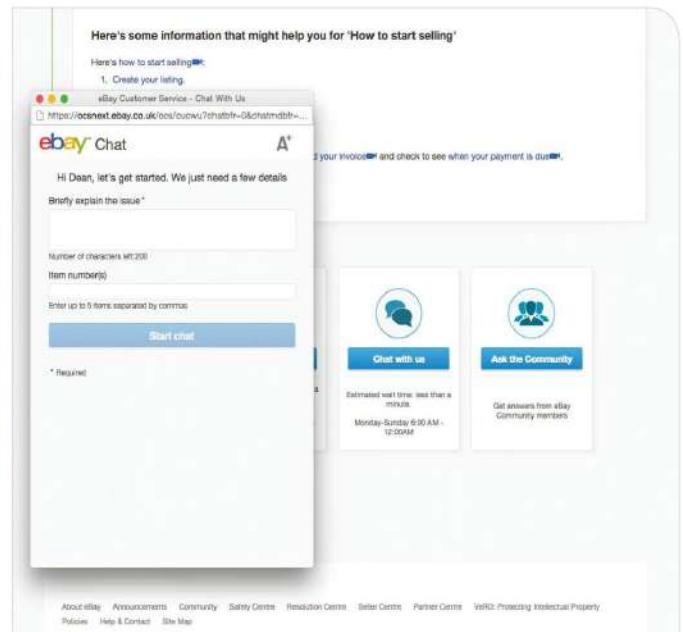
01 Basics of selling

If you're fairly new to the eBay world or are a casual user who's thinking of setting up an eBay business, then eBay's own Seller centre (sellercentre.ebay.co.uk) is actually surprisingly useful. Packed full of information on everything from what to sell to taking the best photos of your old dining table, there's every chance that your newbie query can be solved here on this page.



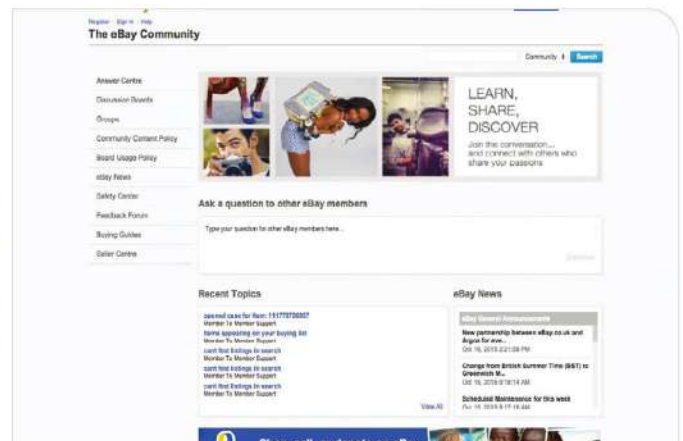
03 Send a tweet

For a fairly quick response from eBay themselves, you could try the Ask eBay Twitter page at [@AskEbay](https://twitter.com/AskEbay). They're open seven days a week from six in the morning until six in the evening (Pacific Standard Time) and although most of the responses are along the lines of 'We're sorry to hear that, why don't you email us', there's also the small chance that they might be able to help if the problem is relatively straightforward. After all, there's no need for you to spend hours on the phone on hold if it's a simple problem that it can be solved in 140 characters.



02 Fancy a chat?

One area of eBay's customer services site that we have had some success with in the past is eBay Chat. Head to the customer services pages at ocsnext.ebay.co.uk/ocs/home and then click on Contact us at the bottom of the page. Click on the area you need assistance with and, hopefully, the Chat with us option will appear along with an estimated waiting time – this is usually only around a minute.



04 Care in the community

However, it's eBay's Community area (community.ebay.co.uk) where you're likely to have the best chance of finding someone to help you. Made up of a series of discussion areas, you simply post your question and wait for someone in the community to come back with an answer. Surprisingly, there are a lot of people out there who really (and we mean *really*) know their stuff about eBay.

There are several advantages to going directly to the Community area rather than trying eBay's customer services' numbers or emails. Firstly, as the eBay Community pages work like any other forum and in real time, there's every possibility that your query will be answered quickly and accurately by another eBay member. Also, as it'll be read by a large number of people, you may well get multiple replies with varying suggestions offering different approaches to your problem. Although this can get confusing if the advice differs wildly, it's good to understand that most problems have more than one solution.

Finally, by scanning through the questions already posted (or searching through the thread titles) you may well discover that someone's already had the same problem you're having and there may already be a solution posted for you. This then saves you all the hassle!

LIFE HACKS

TURN YOUR TABLET INTO A PLAYSTATION

Turn any old Android tablet into a classic games console

Despite being able to install PlayStation apps and some choice games onto Android via the Play Store, there are still many classic PlayStation games confined to history since developers haven't ported them to mobile. Don't fear, however – here at Gadget, we've been testing out all the emulators available to download from Google's app store. We quickly came to the conclusion that ePSXe is the best: it plays most games without a hitch and (depending on how powerful your tablet is) can even upgrade the graphics and smooth those jagged pixelated edges a little bit.

Just a heads up, though: if you want to download and install an emulator on your Android tablet, you must legally own the console and the games themselves

– owning the hardware, in a roundabout way, gives you the right to run the BIOS necessary for the emulator to work. The same goes for the games you want to run. If all that's taken care of, though, you'd be surprised at how well even older tablets can run PSOne games (powerful machines can even get a few PS2 games up and running!).



THE BEST EMULATORS ON ANDROID



MAME

As threatening as it sounds, MAME actually stands for the rather more pedestrian 'Multiple Arcade Machine Emulator.' If you've got a hankering for all those classic coin-operated games you used to love back in the day, we're sure one of the 8,000 titles on Android's MAME will suffice.



SNES

You'll need an Android device with at least a 1GHz processor to be able to play SNES games on the go, but once you do, the Super SNES app is a fantastic addition to your emulator machine: it's cheap and runs no ads! This is where you'll find all the best Mario games, too.

HOW TO GET SET UP



01 Download your emulator
You can pick up the ePSXe emulator for a mere £2.37/\$3.75 on the Play Store. If you're after a free one, there are other options available, but we'd recommend the paid versions: you will find they run so much better, and you absolutely get your money's worth.



02 Make sure you've got a .zip unpacker
Remember WinZip on Windows? Head to the Play Store and get the mobile version – 7zipper is our recommendation. You'll need this to be able to unpack the BIOS and the games you'll transfer to your tablet.



03 Acquire a PlayStation BIOS
You can rip a BIOS from your PlayStation – you'll have to modify it first, but there are plenty of in-depth guides of how to do so online. We recommend learning this, though – because then you'll basically be playing your own console on the go!



04 Unpack the BIOS file in 7Zipper
Boot up 7Zipper and hit 'download' on the main screen. Find the BIOS you want in either your Downloads folder or a custom dump you created yourself (you might want to create a new folder with the game name for indexing's sake). Extract the BIOS and close the app.



05 Run the BIOS in ePSXe
Open the emulator and find the 'run BIOS' option on the landing screen. The app will automatically scan for any BIOS on your local storage or SD card. This may take a while, depending on how much data you've got on your device, but once it finds the BIOS, you can just hit 'run'.



06 Enjoy some mobile PlayStation gaming!
You'll be taken straight to the PlayStation startup screen! If you've mounted a ROM from a game you've ripped yourself, the initiation sequence will start automatically. It's worth noting you can use a DualShock 3 controller with most Android devices if you buy an OTG (On-The-Go) cable.



GAMEBOY ADVANCE

The free app *MyBoy! Free* allows you to play all your favourite GBA games (the remakes of *Pokémon Red/Green* are our favourites) and it lets you play multiplayer via Bluetooth, instead of that old proprietary link cable you had to use in the good old days.



SEGA MEGA DRIVE

US readers, we're sorry, but this is what the majority of the world calls the Sega Genesis. The best *Sonic* games are available here, and if you download the free version of *GenPlusDroid*, you'll get a few ads. It supports controllers, and if you throw it to your TV you can get some good multiplayer action running!

LIFE HACKS

HOW TO BUILD A SHED

Grab some tools and get your DIY game on

Building a shed is a completely different ball game to assembling flat-packed furniture, mainly because the tolerances used to measure each individual part are not as exact as for indoor fitments. Even if you have a detailed set of instructions, we would advise to check out a few things before you start. Make sure that the windows fit perfectly and ensure that the felt is ample enough to offer the protection you need. Also, you will need a strong base to place your shed on and to be aware that any gaps in the construction will likely cause damp or rain to intrude and damage the shed. Sheds are naturally ventilated so damp should not be a concern, but rain is a nuisance and should be protected from at all times. Find a friend to help you construct the shed, preferably one who is happy with a couple of beers for payment, and the job will be done in no time at all. Now all you need is to gather all of the right equipment, some decent weather and a copy of our guide and you're all set to get building!

£260 | \$375
rowgar.co.uk

Rowlinson 6x4 Modular Shed

This mid-range shed is a good size for your storing your tools without taking up too much space. It has two windows – one fixed and one opening.

Panel power

Shiplap panels line each side of the shed, with the grain and direction of the wood adding additional strength against the elements. They're easier to fit as well!

Solid flooring

The Rowlinson utilises a solid board flooring, something not too common in sheds of this type. It provides better stability and an easier platform to build on

CONSTRUCT A WOODEN SHED



01 Prepare the ground

You should aim to keep the shed off the ground using deck piers if possible, as standing water on the ground will be absorbed. It's also imperative that you lay the entire base of the shed on flat ground to make it easier to align the shed panels correctly.



02 Building the walls

Start with the back panel and place it on the base, but do not attach it to the base just yet. The panel with the door must be placed last, so keep this in mind as you build. Use a timber batten to keep the panels aligned if you are unable to hold the panels in place.



03 Stabilise it

Place a screw at the top, middle and bottom of the corner joint where the panels meet. It's advised to add screws into the bottom of the panels if your shed is bigger than average to stabilise it, but, for now, we need to use these screws to keep the panels level.



04 Fit the roof

Fit the roof support beam across the top of the shed, slotting it into the grooves left by the panels. Use screws to attach an L-shaped bracket, which should keep the beam aligned correctly. Mark the beam with a pencil where you want the roof panels to sit.



Styrene glazed

Shed windows tend to be flimsy and usually scuff easy, but with the styrene glazing used here, most bumps and scratches won't appear without a substantial impact

YOU WILL NEED

- ✕ A power drill or electric screwdriver
- ✕ Claw hammer
- ✕ Tape measure
- ✕ Spirit level
- ✕ Retractable knife
- ✕ Metal ruler
- ✕ Builder's square
- ✕ Safety goggles

"Any gaps will likely cause damp or rain to intrude and damage the shed"



05 Add remaining panels

Lift the roof panels and slot them into place. You can choose to secure them in place with either screws or nails. Apply the felt on to your roof, using a Stanley knife to cut off material that overlaps the corners before fitting.



06 Build then place

Only when the walls and roof are in place, physically attach the shed to the base. Ensure that it is square and correctly put together by using a spirit level on the edge of each panel. Use screws to attach the interior and exterior of the panels to the bases.



07 Time to install the windows

You can now slide the window into place and rest it on the sill. Nail or screw some beading into place to secure it. Only after everything has been fixed should you remove the protective film from the main window component.



08 Finishing touches

Your shed is nearly ready, but we recommend adding an end beam to the edges of your roof. They can provide extra cover for the felt against wind and rain. A thin beam of wood will work, so feel free to attach with nails or screws depending what you have to hand.

LIFE HACKS

COOK THE PERFECT PULLED PORK ROLL

Ideal for a good pig-out

Gastro fads come and ago, but pulled pork shows no signs off going out fashion.

The stringy, tender and delicious strands of slow-cooked shoulder that seem to be the perfect bedfellow for a soft brioche bun and a spicy barbecue sauce. Traditionally, authentic pulled pork is a US barbecue dish that's cooked for hours over a charcoal pit until the meat is literally falling apart and then ready to be pulled apart or shredded.

Unfortunately, outside of Texas, most of us don't have the luxury of a charcoal pit in our backyards. But that shouldn't stop you making your own pulled pork as there's a very straightforward way to create it in your own homes. Although many will (try to) argue that making pulled pork is a science that requires a cunning blend of seasonings and very strict temperature control, the reality is that it's easy to make something that most would be convinced had been cooked over glowing charcoal embers for 12 hours in a blind taste test. Just follow our steps and you too will cook with confidence this summer.



01 Aye, there's the rub

Once you have your pork joint, mix up a dry rub of one part sugar, one part salt and one part paprika. If you want something a bit more spicy, though, then feel free to add garlic powder, mustard powder, cayenne pepper or cumin to the mix. Try out different combinations to find the one that suits you best. Once everything's mixed up, rub the spices into the joint. Before cooking, leave the joint in the fridge to cure for a few hours.



02 Slowly does it

Now you're ready to cook the meat. Find yourself a baking tray large enough for the joint and then put a wire rack in it, which is what the meat will rest on while it's cooking. Pour some water into the tray, which should be enough to stop the meat drying out, but not too much so that the meat is actually sitting in the water. Now cover the whole thing in foil and put it in an oven at around 140°C.

GRILLING GADGETS

If you'd rather not cook pulled pork in the oven, try these alternatives



Bear Paws

Described as the perfect tools to pull apart pork, it's very hard to disagree when you take a look at the lethal-looking pair that's guaranteed to tear apart any piece of cooked meat in seconds.

£5 | \$10 | bearpawproducts.com





03 Getting saucy

The joint will take around four hours to cook, so bring it out after that and check the middle of the meat with the thermometer. If it's cooked all the way through and comes away from the bone when pulled apart with a fork, then it's done. Now you can add some sauce to the meat and cook for another 10-15 minutes uncovered to crisp everything up, or if you've got a barbecue handy...



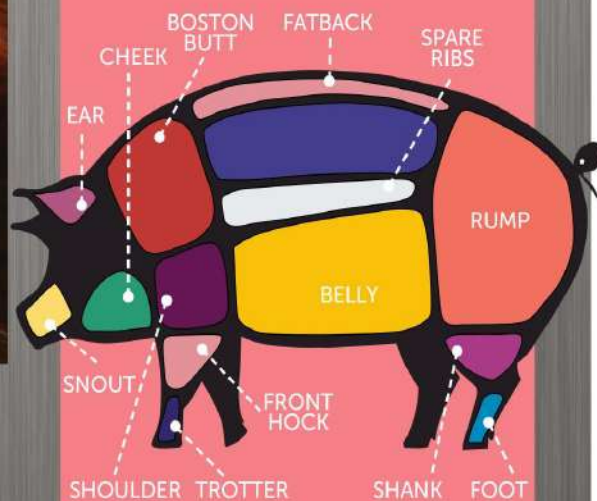
04 Fired up and ready to go

If you want to add even more flavour to it then you can always pop it on the barbecue for half an hour. Get the barbecue fired up and ready to cook on (use a charcoal grill for this) and then put the pork (skin-side down) onto the grill. Flip the meat after 15 minutes and then cook on the other side for another ten. Be very careful when you lift the meat on and off, or when you flip it, as it'll be very tender and liable to fall apart.

THE FIRST CUT IS THE DEEPEST

The first thing to know about making your own pulled pork is that the cut of meat you choose is very important. The meat shouldn't be too lean, so you want to pick a piece that's rich in intramuscular fat – in other words, you can see plenty of lines of fat running through the meat. This fat will break down as you cook the meat slowly, making the pork tender. There's only really one cut of pork that's suitable for the job, and that's the so-called 'pork butt' or 'Boston butt'. If your mouth just dropped open in sheer horror, rest assured the name has nothing to do with rear end of a pig. It's actually an American term for the shoulder section of the animal, based on the fact that when meat was originally stored for shipping, it was placed into casks or barrels, which were also called 'butts'.

The shoulder is traditionally one of the cheaper cuts as it's not one that you'd use for a roast. Because of this, it's not one that you're likely to find in your supermarket. If you can, head to your local butchers and they'll be able to give you what you want. For the best cut, ask for a joint from the neck end and with the bone in. Alternatively, you could use a joint of pork belly. Although it isn't as meaty, it does cook a lot quicker and it's very easy to pull apart.



Weber Original Kettle barbecue

If you're going to finish off your meat in a barbecue to really go for that smoky flavour, then they don't come much better than a Weber – and make sure you go for the charcoal model and not the gas one.

£170 | \$100 | weberbbq.com



Morphy Richards Slow Cooker

If you happen to have a slow cooker lying around then they're a great way to cook the meat, as you can put it on a low temperature and leave it all day to cook in a spicy marinade.

£30 | \$40 | morphyrichards.com



Landmann Digital Thermometer

Making sure that a joint of pork is cooked properly is essential, and the easiest way is to invest in a digital thermometer. It's the quickest and most accurate way to make sure the joint is cooked.

£20 | \$35 | landmann.co.uk

LIFE HACKS

TURN YOUR PHONE INTO A HOLOGRAM PROJECTOR

Create 3D images using any smartphone with this simple hack

This is the sort of thing we absolutely love, where someone has the delicious idea to use technology in a way that's never been considered before. In this case, it's projecting four images on a looped video from your phone onto four angled pieces of clear plastic to create the illusion that the image is floating just above your phone.

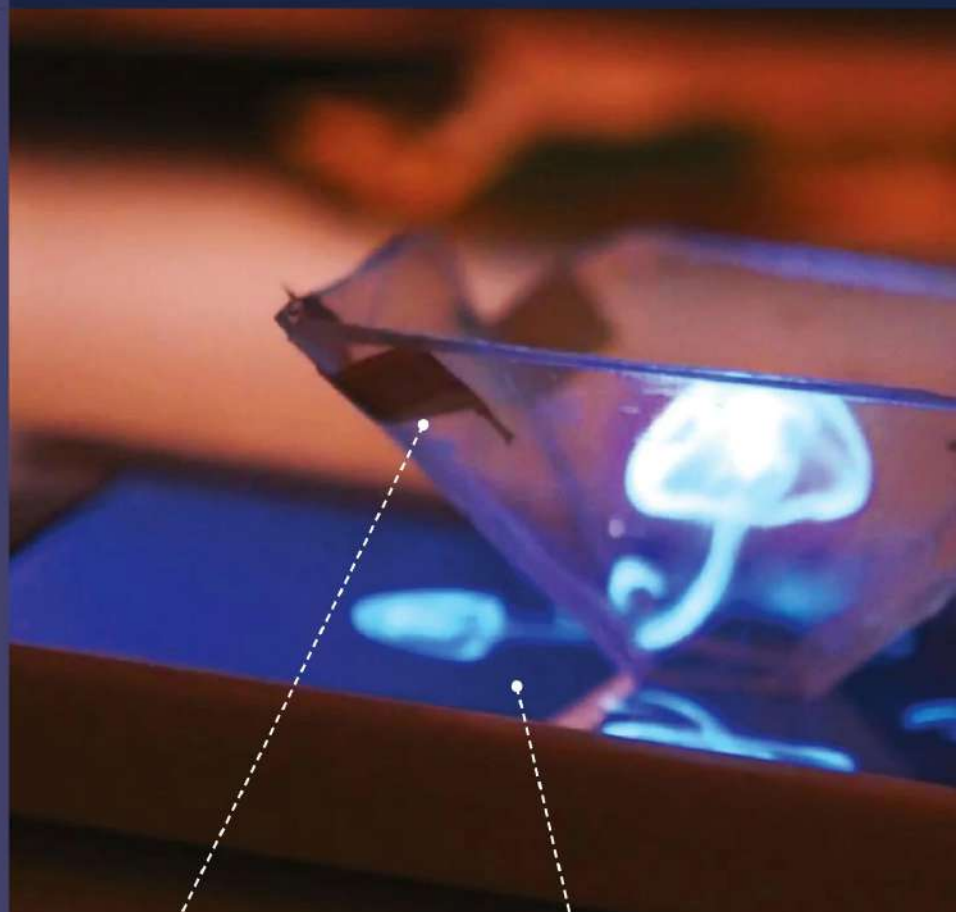
Best of all, the equipment you need to get the hologram working on your phone can be made quickly and easily with stuff that you probably already have lying around the house. We've given you a few suggestions for videos you might want to check out, but a simple YouTube search will bring up loads more.

We're indebted to the very wonderful YouTuber Mrwhosetheboss for all his assistance with this workshop and recommend that you also check out his original video (youtu.be/7YWTtCsvgvg) and channel for more tech highlights.

What you'll need

It's time to get all *Blue Peter* about this. Before you crack on, here's a list of the items you need to gather up. Thankfully, they're all things you're likely to have lying around somewhere and if you don't have any graph paper then feel free to make your own. The lines for this need to be two millimetres apart.

- Graph paper
- CD case
- Tape or superglue
- Pen
- Scissors
- Smartphone
- Sharp knife or glass cutter

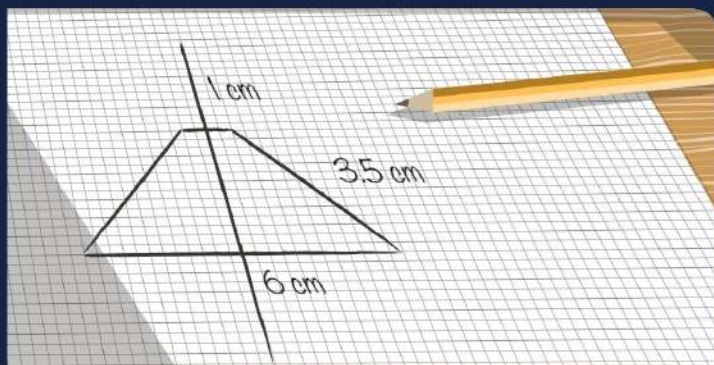


A quick fix

We used tape to stick the sides together, but clear tape would obviously look better – or, if you have a steady hand, you could try gluing the sides

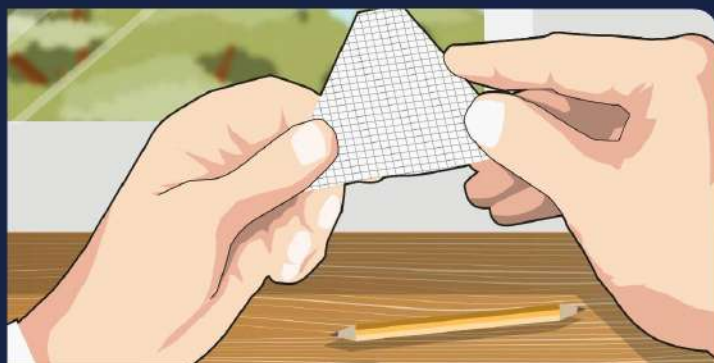
Switch off the lights

Although we have a pretty good image here, this is something that really works best in a completely dark room, so pull the curtains, switch off the lights and try to block out as much light as possible



01 A simple design

To start, you need to mark out a basic trapezium shape on graph paper, as shown here. The top edge needs to be one centimetre across and the bottom one should be six centimetres – with two sloping sides of three and half centimetres each.



02 Cut shapes

Cut the shape out and this should be what you're left with. It's worth noting that the sizes given are just a guide. If you have enough plastic – or want to do the hologram on a tablet – then you can double or even triple the dimensions.

TIME FOR THE SCIENCE BIT

So how does it really work? Are you actually looking at a hologram? Well, not quite. The angle of the clear plastic provides just enough reflection to bounce the light from the image displayed on the phone's screen back onto the plastic and because the plastic is clear, it gives the illusion that the image is floating in midair. As you have created something with four sides, the image can be viewed from practically any angle, which helps to increase the realism of the illusion.

Use your illusion

Here's the viewer we made earlier and although this is just a small one, you're free to make one as large as you wish – so it'll display a better image if you're viewing the hologram on a tablet!

Four squared

To help create the 3D illusion, there are four versions of the image placed at 90-degree angles to each other. The space in the middle is where you place your viewer.



03 Mark your spot

Take off the sides of the CD case to make it easier and then carefully trace around the edges of the template on the plastic. The more accurate you are then the more likely you'll cut out a perfect shape and the final holographic effect will be sharper.



04 Four of a kind

Cut the shape out of the case slowly and carefully, using the sharpest knife you can find. You need to repeat this three more times until you have four identical shapes. Again, the more care you take here, the better the end result will be.



05 Stick it all together

Tape the four shapes together so you get something like this. You can use any type of tape, but clear tape gives you the best effect. You can glue the sides together if you wish, but take care with this as it's very easy for the glue to spread along the plastic.



06 The end result

Run one of the holographic videos, switch off all the lights (you really want it to be as dark as possible) and place your creation on the phone so that it's perfectly in the middle of all four images showing on the screen. And that's it. Enjoy!

3 OF THE BEST HOLOGRAPHIC VIDEOS ONLINE



You're our only hope

It's not possible to round up holographic videos without this gem. Turn down the lights and pretend she's talking to you.

youtube.com/watch?v=udNNnoepqtk



Take flight

The longest video in our list, as it's over five minutes long, it's a super-sharp display of various hummingbirds moving in and out of the screen.

youtu.be/Uftu0RaIDkw



The variety show

This video is a mixture of jellyfish, sharks and butterflies and although it's short, it's beautifully animated throughout.

youtube.com/watch?v=CIIszi2Kv_1k

LIFE HACKS

8 WAYS TO SURVIVE YOUR FIRST MARATHON

Beat your personal best with these tips and accessories

Taking on a marathon is no easy feat – it requires months of training and will push your body to the limit. Thankfully, gadgets have made the whole process a little less painful over the last few years. From gizmos that help you train more efficiently to accessories that make the 26 miles feel that little bit shorter, tooling up before you head out on a run can be the difference between making it to the finishing line and collapsing half way through.

Preparation is everything when it comes to running such long distances, so we've got some top tips for the future winners out there – including training techniques and helpful advice for the big day. We've even gathered together a few of the best gadgets that you can use to get ready for a marathon and ensure that you get to the finish line in your personal best time.



01

Get the right shoes

Choosing the right footwear is essential if you want to succeed. You need something lightweight, but with good support. Wear your chosen trainers on at least one ten-mile training run at marathon pace before the final race – that's the only way to work out whether you're going to develop blisters.

02

Don't forget to hydrate

Drinking while you run is vital, and energy drinks are much better than water as they provide fluid, carbohydrates and electrolytes. Work out where the refuelling stations on your marathon will be, and when you're practicing only take on liquid at those points to prepare for the final race.

05

Prepare for chafing

When you're running for hours, chafing is inevitable. Do at least one long practice run in all your gear, and see which areas are worst affected. Some running lubricant (or new shorts) can help with thigh chafing, while a couple of plasters can stop chest-based problems from occurring.

06

Don't ignore the warm-up

Walk or jog gently around for the half hour before the race starts, and stretch gently. You don't want to overdo it and use up the energy stored in your muscles, so keep it light, but don't forego warming up entirely. Concentrate on stretching your calves, hamstrings and lower back.



FACTS AND FIGURES

42,195

The length of a marathon in metres

3rd

The fastest mile of the London Marathon with an average time of 8:05

239

Most marathons run by one man in one year (Larry Macon, USA)

38,000

Number of people who took part in the London Marathon 2015

5,585

Number of people who skated the Berlin Marathon in 2015

GEAR UP FOR THE MARATHON



Fitbit Charge HR

An activity and heart rate monitor, with the added bonus of being able to track your sleep and notify you of any incoming phone calls.

£120 | \$150 | fitbit.com



Jabra Sport Pulse

Wireless Bluetooth headphones that offer an in-ear heart rate monitor, plus full sweat and dust resistance. Jabra claims they won't fall out, either.

£200 | \$200 | jabra.co.uk



Techknit Cooling Towel

These towels use a unique capillary system to spread moisture and perspiration throughout the fabric, while a quick shake of the towel evaporates water and cools it rapidly.

£17.50 | \$18 | missionathletecare.com



OOFOS Recovery Sandals

These sandals absorb shock thanks to a new type of foam, giving your feet, knees and back a break from the impact of running while providing excellent arch support.

£40 | \$45 | oofos.com

03

Wear the right clothes

If you're running for a charity, you may want to run in a t-shirt they provide. As wonderful as the charity may be, you'll be much better off wearing proper running gear made of nylon or similar materials. They'll absorb sweat and regulate your temperature far better than cotton.

04

Don't push it during training

With a week to go until the marathon you might feel like you're in great shape and be tempted to push yourself in training. Don't do it! Stick to the level of training you've become used to, and have confidence in your own fitness. Maintaining your pace will give you the best results.

07

Drink early and often

When running, your thirst mechanism won't keep up with your body's needs, so take on liquid at the first refuelling station even if you don't feel like you need it. Drinking at every aid station will help postpone serious dehydration later, meaning you'll be more likely to maintain your pace.

08

Get your head in the game

You might have trained for months and bought all the best equipment, but your mindset has to be right. Play games in your head, like counting every three miles as a 'lap' to help the whole course feel shorter. Most importantly though, stick to your pacing and don't get carried away.

LIFE HACKS

BECOME A YOUTUBE SUPERSTAR

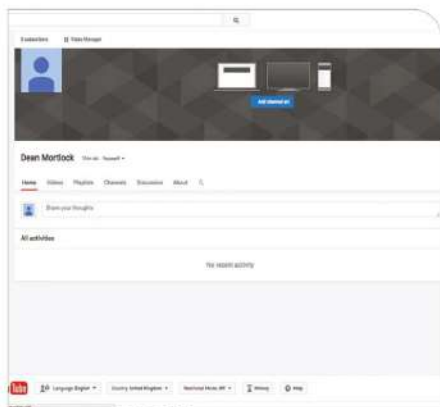
Turn a hobby into a profession by becoming a YouTube vlogger

We've seen all the 'YouTube sensation buys mansion in Hollywood Hills' stories and maybe, just maybe, you've thought that you'd like a slice of that particularly flavoursome pie. There are thousands of people out there making a tidy living out of recording video blogs and posting them for all to see, but don't think for one minute that it's easy. For every YouTube millionaire, there's a hundred people struggling to make small change.

If you have a good topic in mind, an angle to give it some originality, the ability to record yourself without clamming up a lot and a vague sense of humour too, then you're halfway there already. This workshop has been written to help you get the other half to succeed. We can't promise that you'll be a millionaire this time next year, but now at least you'll be prepared and have the tools you need to do the job right.

"There are thousands of people out there making a tidy living out of recording video blogs"

6 steps to world-wide YouTube fame



01 First steps to stardom

Your first step to YouTube fame is to create a channel. This is simple because if you have a Google account then one will be created automatically. If not, set one up now, adding a suitable cover image, profile pic and username.



02 Prepare a script

You want to make sure you're prepared when it comes to filming your first YouTube video, so take some time out to write a script. You can always adapt it slightly when filming, but it'll make the whole process much quicker.



03 Location, location, location

Now work out where you're going to film. What will your backdrop be? If you're filming in your bedroom, make sure that there's not a pile of dirty washing in shot and try to put up posters of the topic your filming.



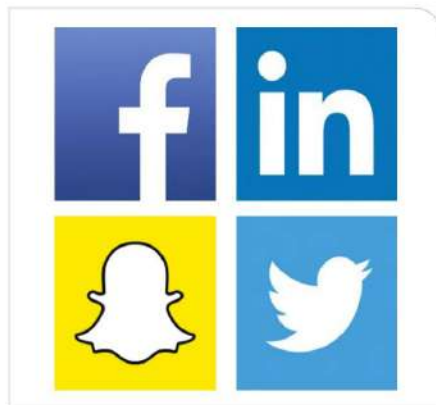
04 Lights, camera, action!

You'll probably be nervous when the camera's pointing at you and the red light is flashing, so as we mentioned, the trick here is to know what you're going to say. Have fun and make your passion for the subject come through. It gets easier with practice – promise!



05 Create a masterpiece

When the video has been shot, it's time to edit it. Here's where you can trim out any mistakes or bits you're not happy with. Either use the video-editing software that comes with your PC or look online for an alternative. There are plenty of excellent free ones out there.



06 Get yourself known

Getting your channel noticed isn't always easy, but firstly it's wise to add as many tags as possible so that your channel will show up in search results. Then make sure you publicise it on all your social media accounts and ask your friends to share it too.

Assemble your video studio

Killer camera

Able to shoot 1080p HD video and over two hours of good battery life, this Sony camcorder is one of the best that's on the market and it's got a great price too.

Sony HDR-CX240E Handycam
£120/\$170 | sony.com



Get the light right

This reasonably priced softbox is the ideal lighting solution for vlogging as it gives you a warm light without blinding you or adding glare to the video.

Neewer 20" x 28" Lambency Lamp Shade Softbox
£20/\$20 | neewer.com



Magic mic

Not only does it look rather cool, but the Snowball is also a powerful microphone that's capable of delivering crystal-clear audio straight to your Mac or PC.

Blue Microphone Snowball
£67/\$50 | bluemic.com



Try-hard tripod

We chose this Sony tripod mainly because it's compatible with our camera recommendation, but it's still a fine and sturdy piece of kit.

Sony VCT-R100 Tripod
£27/\$26 | sony.com



You've got the fame, now make the fortune



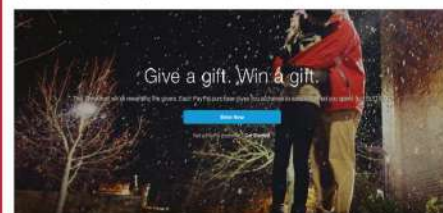
01 Google AdSense

AdSense is an easy way to make some money through YouTube. Adverts are automatically attached to your videos and you get paid every time someone clicks on them.



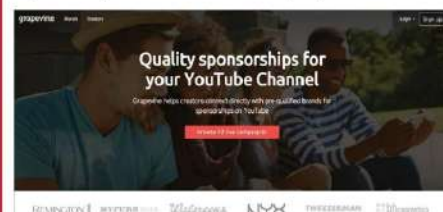
02 Contact the experts

If you're getting popular (around 50,000 subscribers) then it's worth talking to one of the social media talent agencies set up specifically to promote online personalities.



03 Ask for donations

There's no shame in asking for money, so link your channel to a payment service and ask people for a small donation. Always suggest a (modest) amount and thank people.



04 A word from our sponsors

There's no shame in a bit of product placement or sponsorship and it's another way you can bring some money in to fund your quest for YouTube fame.



05 Become a partner

Finally, one of the most obvious ways is by becoming a YouTube partner. This will enable you to attach either videos (ones that play before yours) or a banner display ad.

LIFE HACKS

HOW TO CARVE LIKE A PRO

Master the art of slicing and serving up meat treats

3 LOW-TECH WAYS TO SHARPEN YOUR CARVING KNIFE

01 Whetstone

Whetstones consist of high-quality abrasive grits – some fine, some coarse. Rubbing coarse stones against rough blades smooths the metal down, so you can use the fine grit to actually get your knives sharp.

02 Honing rod

Also known as a steel, these aren't used to make your dull knives sharp again, but rather to keep knives constantly in a working state by realigning the metal on a blade's edge and massaging nicks and indents away.

03 Coffee mug

If you have nothing else, the exposed ceramic ring you tend to get on the underside of a coffee mug is coarse enough to sharpen some blades. Just sweep the knife edge across it gently at a 20 degree angle.

£10 | \$20
anysharp.com

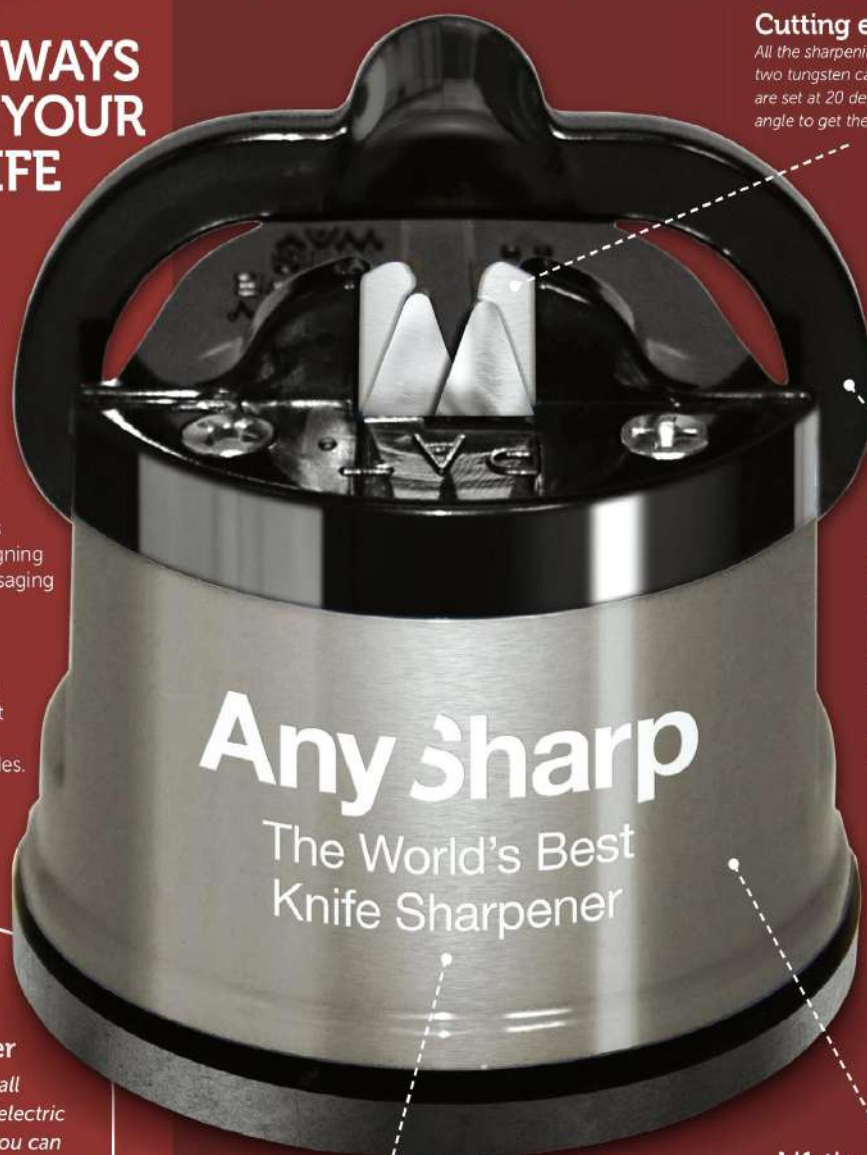
AnySharp Pro Knife Sharpener

You can spend a small fortune on a stylish electric knife sharpener or you can spend a tenner on the simple to use and very effective AnySharp instead.

Carving the Sunday roast is a rite of passage, handed down from parent to child. It can be nerve wracking though, especially if you're surrounded by a hungry group of family or friends who are watching your every move. Like everything, however, there's a right way to do it and a vast number of wrong ways.

Should you go with a traditional knife or plump for an electric one? What's the best way to make sure your knives are always sharp? And what the hell is larder trimming? Luckily for you, my novice meat-carving friend, the answers to all of these questions can be found on these very pages. Have a butcher's at this.

"If you really want to show off in the kitchen then splash out on a decent set of chef's knives"



Cutting edge

All the sharpening is done via these two tungsten carbide tools, which are set at 20 degrees – the optimum angle to get the perfect edge

Hands-free

Obviously you want to avoid knife or sharpener slippage and potential loss of fingers, so a cunning feature of the AnySharp is a locking suction cup that's activated when you pull down the lever

AnySharp
The World's Best
Knife Sharpener

Best in the world?

It's a bold claim to be sure, but if there's a better knife sharpener out there then we've yet to see it

Lifetime guarantee

The AnySharp comes with a lifetime guarantee, so if you ever need to change the sharpening tools then you can get a new head, unscrew the old one and simply replace it

HOW YOU SHOULD REALLY CARVE A JOINT



01 Larder trim your joint Get your butcher to larder trim the fore rib of beef for you – this exposes the rib bones and removes the excess fat. Make sure they leave some of the fat, as this will keep it tender.



02 Now remove the backbone Flip the joint over and if the backbone hasn't yet been removed, then do so now. This will make carving the joint much easier after it has been cooked.



03 Leave it to stand Once cooked, let it stand for 10 to 15 minutes to help the meat firm up. With a sharp knife, cut along the edge of the ribs and follow the contours of the bones around the joint.



04 Insert the carving fork To help hold the meat in place, insert a carving fork about halfway along the joint. Make sure you give yourself plenty of room to carve, so if it's a smaller joint, insert the fork further back.



05 Ready to carve! Now you can carve. Cut across the grain and if the knife is sharp enough, you shouldn't have to press too hard. As you've removed all the bones beforehand, you should be able to carve the whole joint in one go.

MODERN VERSUS TRADITIONAL

Gadget lovers might be tempted to invest in an electric carving knife, but if you really want to show off in the kitchen then splash out on a decent set of chef's knives



Electric carving knife

Once the essential kitchen tool of every 1970s' household, the electric carving knife was slowly left at the back of kitchen cabinets gathering dust. Recently they've come back into vogue though, mainly helped by celebrity endorsements from the likes of chef James Martin. Although not ideal for everyday use, they're great for hacking into a turkey on Christmas Day or the Sunday roast.



Chef's knives

If you've got the money though, nothing reeks more of class and professionalism than a decent set of chef's knives. You can get a half-decent set for around £50/\$70 or splash out hundreds of pounds (or dollars) on a knife that will last you a lifetime. Japanese knives are generally considered the best and Global are one of the biggest brands in the world.

LIFE HACKS

FIX A PUNCTURED BIKE TYRE WITHOUT A REPAIR KIT

Feeling a little flat?

Cycling is most definitely on the rise – it's impossible to head out onto the roads on a warm day without spotting a train of Lycra-clad road racers. This is a good thing, but if you're one of those cyclists who's stuck in the middle of nowhere with a flat tyre then it's not quite so good.

We obviously recommend you take a puncture repair kit with you at all times, but there will always be times when you

have forgotten it or run out of patches, so if you're stuck with a puncture and no kit, what do you do? Thankfully, there are a few solutions out there that you can use to get you fixed up and back on the road. With the exception of the Patchnride though, these are temporary fixes, and although they should get you home in one piece, it's wise to take it steady until you can get your bike properly fixed.

"Stuck with a puncture and no kit, what do you do?"

METHOD

01

PLUG THE HOLE WITH LEAVES



01 Tyred out

Let's assume, for argument's sake, that you've headed out on your bike without a repair kit or a pump. Your tyre is flat and you're stuck in the middle of nowhere, so what do you do? Well, for starters, remove the wheel with the puncture and take off the tyre.



02 DIY, Bear Grylls-style

Collect lots of grass and leaves and pad out the tyre by filling it with the foliage – moulding them to the outer part of the tyre and working inward. You want to create a solid cushion so fill the tyre by compressing the filling and distributing it evenly around the tyre.



03 Safe and sound

Reattach the tyre to the wheel – taking care that the grass/leaf mixture doesn't fall out as you do – and then fit the wheel back onto your bike. It's not an elegant solution, but it will get you home alright. To be on the safe side though, take it steady and you should be fine.



METHOD
02

USE THE PATCHNRIDE



01 A patch made in heaven
A brand new device for the cycling market, the Patchnride claims to get you back on the saddle in less than 60 seconds after getting a puncture, so here's how it works. First locate the puncture on your wheel and then remove the cap from the Patchnride device.

02 Easy does it
Squeeze the sides of the tyre either side of the puncture and insert the pointed end of the Patchnride into the hole. Pull back the slider on the side of the Patchnride and then push it forward to insert the patch – this will attach itself to the puncture on the inner tube.

£34 | \$35
patchnride.com

Patchnride

The puncture repair equivalent of keyhole surgery, this new gadget can repair a tyre without removing the wheel. Available to preorder now, the Patchnride will launch early this year.



03 Where's the catch?
Now simply pump up your tyre and you're good to go. The Patchnride is designed to repair inner tube punctures of up to 3mm in size and claims to work with any tyre or inner tube. Too good to be true? Well, the technology is both sound and innovative and the only real downside we can see is that it might be a bit pricey to keep purchasing the repair patch pods.

METHOD
03

TIE A KNOT IN THE INNER TUBE



01 A wheely good idea
An alternative method to get you out of trouble, especially if there's no vegetation around, is even simpler. Again, remove the wheel from the bike and this time take out the inner tube. Locate the exact point of the puncture and cut the inner tube right through the middle of it.



02 A knotty problem
You now have to tie the two ends of the inner tube you have created together to form as tight a knot as possible. It's important here to keep as much slack in the tube as you possibly can, this is so you are able to get it back in the wheel – try to make sure you only use a minimum amount of the tube.



03 Practice makes perfect
Pump some air into the tube to check for leaks – you may need a few attempts at the knot to get it just right. When it's airtight, put the tube back into the wheel. Remember it will be hard as the tube is smaller and make sure you don't inflate the tube to its usual pressure, as this is just a makeshift mend to get you home.

LIFE HACKS

6 WAYS TO LIVE ON THE CLOUD

Some simple solutions for an online life

To most people, if you mention cloud-based storage then you'll be met with a blank stare and, occasionally, a nervous twitch. The myths surrounding anything to do with the mysterious cloud are that a) it's complicated and b) it's not safe. Thankfully, neither of those statements are actually true and once you experiment with living a cloud-based life, then you'll never turn back.

Simply put, a number of companies (including ones you may have heard of such as Google, Amazon and Apple) have systems in place that enable you to upload files to a digital storage facility. Why? Well it's a good way to back up your files for one thing and it means that you can access them on any device wherever you are – from music and videos to work files and documents.

So without further ado, here are six ways in which we guarantee the cloud can make life simpler for you, from online photo albums and music, to storing notes and to-do lists.



01

BACK UP YOUR PHOTOS



One of the main uses for the cloud is to store photos from your phone or tablet. Luckily, it's incredibly simple to activate and means you can view your photo library from any other device or computer. Once you're backed up, you're free to delete photos on your device, knowing that they're permanently stored in the cloud – saving you valuable device memory.

01 Switch on backup

On Android, you need to make sure your Backup settings are switched on, so open the Photos app and go to Settings>Backup & Sync. If they're not on, tap the button at the top of the screen.

02 A mobile photo library

Then simply sign in to your Google account on any other device – such as a computer or a tablet – and go to Photos in order to view your library. You can now edit photos, download or delete them, or create albums to share.

03 The joy of iCloud

Apple's own cloud-based storage system is, rather unimaginatively, called iCloud and it works in a very similar way. Make sure that your Apple device's iCloud feature is turned on in Settings and then log onto your computer to see your Apple device's files.

02

SYNC YOUR MUSIC



If you have a large music library and a relatively small amount of memory on your device, then it's probably not a bad idea to store your entire library in the cloud. That way you can sync across only the music you like – safe in the knowledge that it's all stored if you ever want access to it. As always, there are some very simple ways to make this happen.

01 Back up your library

The easiest (and best) way to save your music library to the cloud is via Google Play Music. To start, just download Google's Music Manager from play.google.com/music.

02 Automatic syncing

Google's Music Manager will ask you where you'd like to import your music library from or whether you just want an individual playlist before uploading everything to the cloud and automatically syncing it with any devices linked to your Google account.

03 iTunes Match

There's an easy way to do it on an Apple device too, but iTunes Match will charge you £21.99/\$24.99 for the privilege – although you do get it free as part of Apple Music membership. Alternatively, Apple users can take advantage of Google Play Music.

03

TAKE A NOTE

As smartphones get smarter, our uses for them have rapidly expanded. Now the technology has made it easy to make notes, jot down thoughts and ideas at any point, and the joy of a service like Evernote is that it stores all of these scribbles on the cloud. You can write up some ideas on the move and then continue with them on your computer, safe in the knowledge that everything is stored online and accessible to you at any time from any device. Here's how it works.

01 Sign up to the service

Head to Evernote (evernote.com) and log in with an email and password. It's a free service, but you can pay from £19.99 a year for extra features.

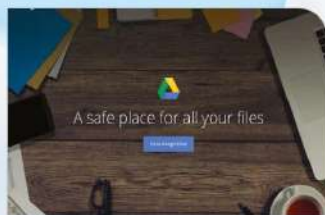
02 Automatic syncing

Creating a note is very easy. You simply write as you would on a normal word processor, then you can also drag and drop any images, videos or any other file into the note too.

03 Viewing notes on your device

Download the corresponding app on your device and the notes you've saved will appear here. Any files can also be opened, as long as you have the app installed to do so.

04 SET UP GOOGLE DRIVE



An invaluable tool for anyone who works remotely or who wants to access files at any time and be able to share them among friends and co-workers, Google Drive enables you to store word processor docs, spreadsheets, PDFs and even Adobe files (Photoshop images or InDesign pages). You get a whopping 15GB of storage for free, plus the ability to buy more.

01 Start organising your life

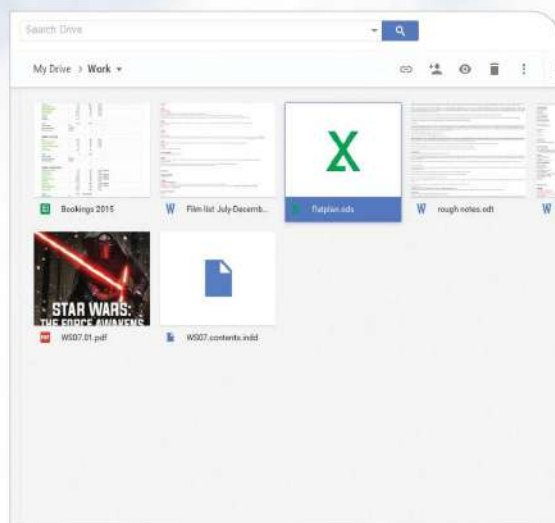
All you need to do to sign up for Google Drive is head to google.com on your device or a computer and sign in with your Gmail account. Then just set up a new folder and you're ready to start uploading files.

02 Get started

In the great tradition of Blue Peter, here are some that we uploaded earlier. You can view PDF files, edit Word files and Excel spreadsheets or just store practically anything else you can think of to be downloaded later.

03 View notes on your device

And, naturally, the same is true on the portable version of Google Drive. Any amendments you make on the move are automatically updated to the cloud.



05 WONDERFUL WUNDERLIST

If you're anything like us, you probably have an endless sea of scraps of paper with important notes scribbled on them. Notes get lost, things get forgotten and life descends into chaos. All that stress can be avoided though with one simple service: Wunderlist. As the name suggests, it's a simple online storage service for all of your to-do lists. You can create, share and alter them whenever you want, and on any of your devices.

01 Start organising your life

That's a bold statement to be sure, but trust us, after a few weeks with Wunderlist you'll be amazed how you ever managed without it. Start by signing up at wunderlist.com.

02 Get started

Make a new folder, name it and start writing up jobs you need to remember. You can easily create multiple folders and drag and drop jobs between them.

03 View notes on your device

The app on your device will regularly sync with your online account, so any changes that you make on the web version are quickly updated on your device and vice versa.



06 DROP IT LIKE IT'S HOT



Still the best way to store files and folders probably has to be Dropbox. You can either upload things directly to the service's online browser or, conveniently, you can also download a program to your computer to just drag and drop items into it like any other folder on your PC. You get 2GB storage to begin with, but can earn more space by referring friends.

01 Share and share alike

If you have a stack of files on your computer or your device that you want to be able to share quickly and easily then Dropbox may well be the best place for you. Head to dropbox.com and then sign up for an account.

02 The Dropbox folder

One of the good things about Dropbox is its ability to enable you to have a standard folder on your desktop to drag and drop your files into – just like this one here. Another great thing is that it's absolutely free!

03 Out and about

The mobile app mirrors the online service perfectly, so you can upload files, view and download anything that's on there. If someone you know needs something in a hurry, then this is the perfect solution from cloud software.

